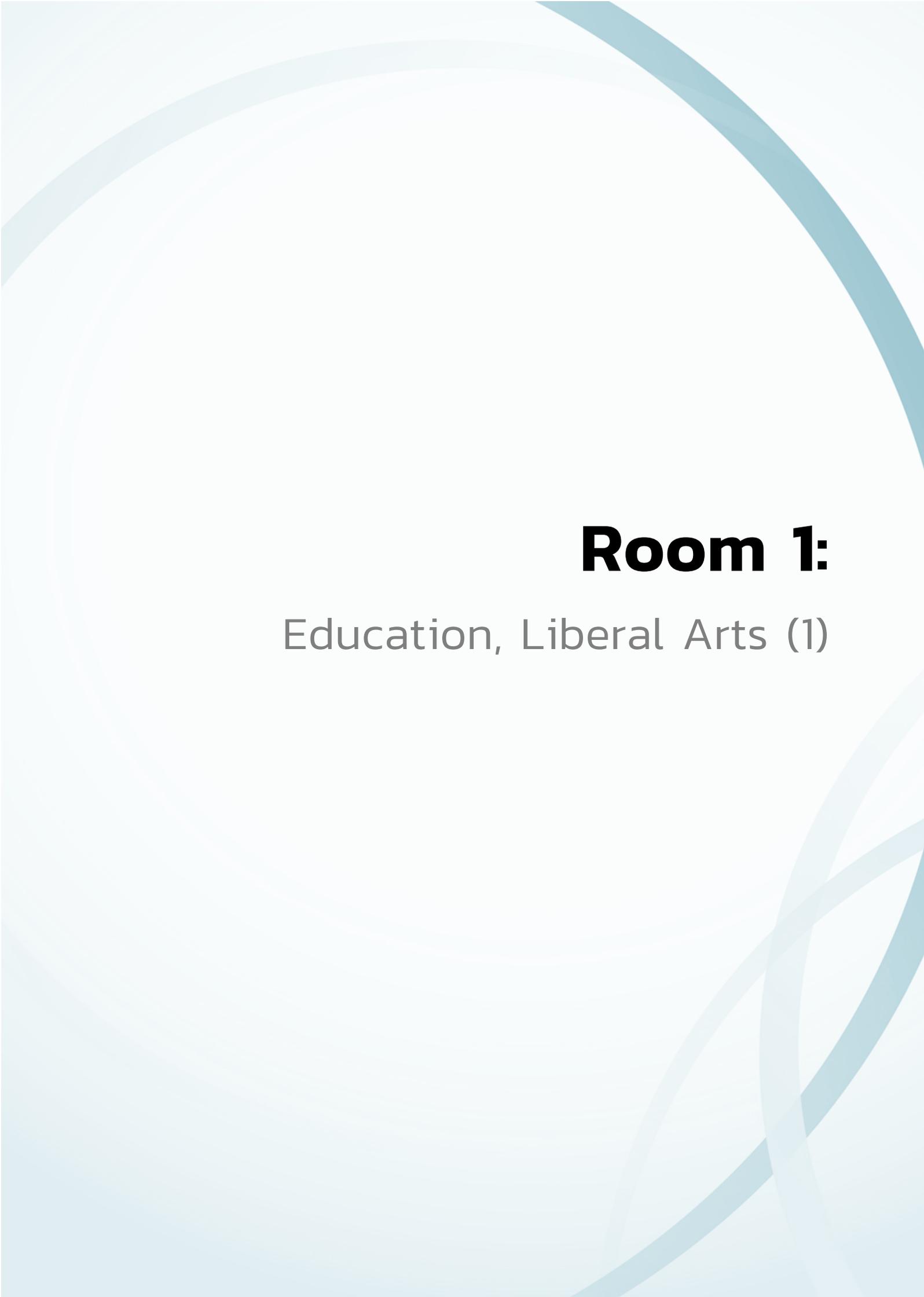


# กลุ่มที่ 1

## บทความระดับนานาชาติ (International Papers)



# **Room 1:**

Education, Liberal Arts (1)

## **Lexical Density of TESOL Pre-Service Teachers' Writing: A Case Study of an Introductory Paragraph by Native and Non-Native English teachers**

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### **ABSTRACT**

Academic writing can be a very demanding task not only for students but also teachers. Even language teachers may find it challenging to write, let alone to teach it. There has been very limited research on the characteristics of English language teachers' writing in the context of foreign English teachers in Thailand. Hence, this research study analyzes lexical density of introductory essays written by pre-service TESOL teachers, comparing both non-native and native English speakers' writing ability. Subjects include six introductory texts written by participants from different nationalities, three native and three non-native English speakers. Overall findings show that the lexical density of both native and non-native pre-service teachers was similar with 58.78% for native speakers and 56.48% for non-native speakers. Findings also reveal that non-native speakers do make more mistakes in grammar, structure, and spelling errors when compared to native English speakers with 2% for native speakers and 8% for non-native speakers. However, non-native speakers tend to use more variety of words when compared to native English speakers. This study can raise awareness in the ELT community to realize that professional development is required regardless of teacher's nationality.

**Keywords:** essay writing, English language teachers, lexical density, native and non-native English speakers

### **1. Introduction**

In a teacher training program, specifically the Teaching English to Speakers of Other Languages (TESOL) program, students or pre-service TESOL teachers are expected to have a solid foundation in different aspects of language skills, especially writing skills. Since writing is seen as one of the most difficult and essential skills to master for ESL/EFL students (Moses & Mohadmad, 2019), pre-service TESOL teachers are required to attain a certain level of writing competence. Hence, academic writing courses are mandatory for all TESOL pre-service teachers as they need to establish a solid writing foundation to understand how the writing processes work and to eventually translate the writing processes and experiences to students to achieve their academic success

(Moses & Mohamad, 2019). However, there have been very limited findings on characteristics of writing from pre-service English language teachers who are currently in a teacher training program in a country where English is given status as a foreign language. Such limited findings may be due to the available numbers of foreign language teachers in the TESOL program in Thailand. Therefore, Thailand provides a context worthwhile to explore as there is an increasing number of foreigners who are converting themselves to become English teachers.

Foreigners who teach English in Thailand comes from different parts of the world: South Africa, the Philippines, Russia etc. However, previous literature mentioned that students appear to prefer native English speakers over non-native speakers (Mahboob, 2004). This is perhaps due to students and even parents' perceptions of non-native English teachers and their competence in the English language and culture. This is found to be a struggle for non-native English teachers worldwide, even in English-speaking countries. A study by Shin (2008), for instance, found that non-native English speaking ESL teachers face many challenges when teaching English which could be due to the view in lack of native speaker competence. However, Shin (2008) addressed that non-native speakers do have an advantage over native speakers in understanding learners' first languages. This research intends to explore English writing features of language teachers from both native and non-native English teachers in Thailand to gain more understanding towards their differences in written language abilities.

To be more specific in when referring to English writing features, this study aims to analyze the lexical density presented in the introductory essays of pre-service TESOL teachers at a medium-sized private college in Bangkok, Thailand. Lexical density is referred to the measurement of the ratio of content words to function words in a text and is used to evaluate the informativeness and readability of the writing in a body of text (Sari, 2016). The understanding of lexical density in this study will provide insights into the writing abilities of pre-service TESOL teachers to understand possible weaknesses one has or provide better course design for future English teachers in a teacher development program based on the context of the nativeness of trainees. The authors chose the introductory section of an essay to analyze as it is where the background and thesis statement are presented. Thus, to investigate the preparedness of pre-service teachers' writings, this study aims to answer the following question:

1. What are the differences in lexical density of teachers from different nationalities when writing an introductory essay?

## **2. Objective of Research**

- (1) To study writing differences of language features (lexical density) of TESOL pre-service teachers when writing an introductory essay paragraph

- (2) To investigate percentage of lexical density of TESOL pre-service native and non-native English teachers when writing an introductory essay paragraph

### 3. Review of Previous Literature

Lexical density refers to the description of content word proportion to total number of words (Johassan, 2008) which can be calculated and presented as a ratio. These content words consist of nouns, verbs, adjectives, and adverbs. Lexical density is a critical component of good writing skills with researchers recognizing it as a reflection of the writer's expertise and a complex social action. However, research on TESOL teachers and their educational backgrounds that led them up to becoming teachers is limited. Most studies found have a central focus on the writing errors made by ESL students. For example, a study conducted in Malaysia on 40 Thai university students found a significant number of lexical errors in their written work with direct translation from Thai to English and word choices being the most common reasons for these issues (Phuket & Othman, 2015). The study categorized each error and found a total of 22 categories of errors, with the lexical categorized errors consisting of 272 errors detected (Phuket & Othman, 2015). These errors were attributed to the students' unsatisfactory English proficiency, particularly writing, which could be traced back to the school program they attended in their 12 years of schooling (Phuket & Othman, 2015). It could be speculated that a non-native teacher may have filled the position of an educator for these English programs as many of these normal English programs offer positions that are not as lucrative as International English programs are to native speakers as they offer a much larger salary with more benefits. This is an unfortunate hindrance to the development of these students' writing skills and any academic success they hope to achieve in the future. This issue is related to Kachru's expanding circle, where non-native speakers may not have the expertise to teach writing effectively, thus affecting students' ability to communicate effectively in English (Kachru, 1986).

Research on the writing ability of pre-serviced TESOL teachers is limited, so taking a broader view may help to identify differences between non-native and native users of the English language, more specifically their writing skills. Kachru's expanding circle shows that non-native speakers are increasingly becoming English educators, sparking a debate about whether native speakers have an advantage over non-native speakers due to their language proficiency (Zhao, 2017). Zhao conducted a study to answer this controversial debate by looking at four distinct groups of English users, including L1 and L2 graduate students and L1 and L2 scholars in applied linguistics, and analyzed their writing skills quantitatively and qualitatively (Zhao, 2017). The study found that L2 writers did not have a disadvantage in their lexical use compared to their native counterparts (Zhao, 2017). The L2 graduate students frequently used high-frequency words, while the L1 graduate students had a more diverse lexical usage but made their own errors in academic writing (Zhao, 2017). However, Zhao stated that more research will be needed for this debate, thus more research also needs to be done to determine why non-native TESOL teachers may lack essential writing skills such as a diverse lexical usage displayed by the L1 students in this study which could reflect in their academic writing. Age could be a factor, as language acquisition is generally easiest before the age of 17, making it more difficult for non-native speakers to achieve fluency (Joshua, 2018). Nonetheless, some non-native speakers may choose to pursue a TESOL career despite not having a high fluency in English which may hinder them in their TESOL teacher training or tertiary education.

The presence of lexical density in the written work of pre-serviced TESOL teachers should be considered as it may represent their level of proficiency, despite the varying factors that may contribute to either a lack or abundance of lexical words in their introductions. Lexical density is a term commonly used in research related to the assessment of vocabulary and written performance of foreign and second language learners. It is defined as the ratio of lexical words to the total words used in either written or spoken language and is a statistical measure of the vocabulary employed in a given text (Ure, 1971). When analyzing linguistic data, definitions of lexical density typically take into account both grammatical and lexical criteria, and specifically examine the proportion of nouns, verbs, adverbs, and adjectives present in a given text (Elgobshawi & Aldawsari, 2022). In a case study conducted in Saudi Arabia, researchers aimed to evaluate the effect of lexical density on the written performance of a controlled group of Saudi EFL undergraduates, as well as investigate the correlation between lexical density and the quality of written work (Elgobshawi & Aldawsari, 2022). The significance of this study to the present case lies in its potential contribution to language teaching and learning processes, particularly since some pre-serviced TESOL teachers are also ESL students who face the challenge of producing written academic work in a non-native language. The study sheds light on the impact of lexical density on writing abilities, offering valuable insights into the significance of lexical density, particularly in EFL learners that could be present in pre-service TESOL programs. The study's research questions addressed whether lexically dense text indicates an improvement in the student's written performance and to what extent the length of written text determines its lexical density (Elgobshawi & Aldawsari, 2022). The researchers found that lexical density in written work of students increased as they moved to a higher level in their field of study and falls in line with previous research done on the lexical density of students correlate positively with students' level of proficiency (Elgobshawi & Aldawsari, 2022). The discovery of higher lexical density in pre-serviced TESOL teachers is particularly significant, as it suggests a potential indicator of their high level of English proficiency. Given the difficulty of English as a second language, lexical density is crucial in all academic work of TESOL teachers to convey essential information accurately and simply. The study also found that Saudi EFL undergraduate students have lower lexical density in their written performance compared to their higher-level peers, and lexical density varies according to learners' proficiency (Elgobshawi & Aldawsari, 2022), which is a vital skill needed in any user or educator of English. The study does suggest that promoting lexical density in writing could potentially improve the written performance of EFL learners (Elgobshawi & Aldawsari, 2022).

## **4. Methodology**

### **4.1 Research Design**

The research approach utilized in this study is quantitative, which entails gathering data from a limited sample size of 6 pre-service TESOL teachers, followed by a thorough analysis to obtain an in-depth comprehension of lexical density in their writing in the introductory paragraph. The study employs a cross-sectional research design, meaning that data was gathered from participants at a particular point in time, with individuals chosen as representatives of a larger population.

#### 4.2 Participants

The study recruited non-Thai undergraduate pre-service teachers from a medium-size international college located in Bangkok, Thailand. The participants were selected using a purposive sampling technique to ensure the study encompassed a range of mixed nationalities. The criteria in selecting participants were their nationality (American & British for native vs. nationality from EFL countries), status as an English language teacher, and a status of being a TESOL student. All participants range from freshman to sophomore year. Table 1 shows the participants' nationality information and topic written. Participants chose to write about different topics relating to current trends in teaching writing and reading.

Table 1: Participants' nationality and topic written

Participant	Nationality	Topic
A	American	Peer-to-peer Written Corrective Feedback: An alternative way Forward for Written Corrective Feedback
B	American	How Does Early Reading in L1 Influence Reading Ability in L2 ?
C	British	The Impact of Motivation on Reading Comprehension in Adults
D	Colombian	The effect of the topics of texts on reading fluency
E	Venezuelan	Auto correction software in education
F	Chinese	The most effective strategies in increasing student's writing ability in a mixed-proficiency level classroom

#### 4.3 Research Tool

The research tools that were used were the free online websites: *usingEnglish.com* and *lumoslearning.com*. *UsingEnglish.com* provides a space for text analysis by providing different linguistic analysis calculations such as word count and lexical density. The text was inserted into a program which then generated a quantitative result. Different metrics were available for the researchers to select to answer the research question, specifically the percentages of lexical density. However, other metrics were chosen as well such as the word count, number of sentences, number of different words, grammatical structures and error. These various metrics were chosen to see associations or links that could be made based on the percentages of lexical density. In addition to *usingEnglish.com*, *lumoslearning.com* was chosen based on the criteria of its ability to analyze the grammar of a paragraph. A tool provided by *lumoslearnig.com* could help to ensure the reliability of the result and provide analysis on tenses, forms, and repetition of words and clauses if necessary.

#### 4.4 Data Collection

Prior to data collection, ethical considerations were taken into account by both researchers. The researchers asked for permission from the participants to get an extract from their assignments. Then, the researchers collected data in the assignment folder in Google Classroom where students had to submit their written works and insert them into a text analyzer using two major programs in *usingEnglish.com* and *Lumoslearning.com*.

#### 5. Result

All participants are second year students in the Bachelor of Arts in TESOL. All participants partook in the assignment of creating a project proposal that had direct relation to reading and writing skills. The assignments were given during the course module known as 902-115 Reading & Writing Project in English as a final assignment. Results from the analysis are displayed in figure 1 and table 2.

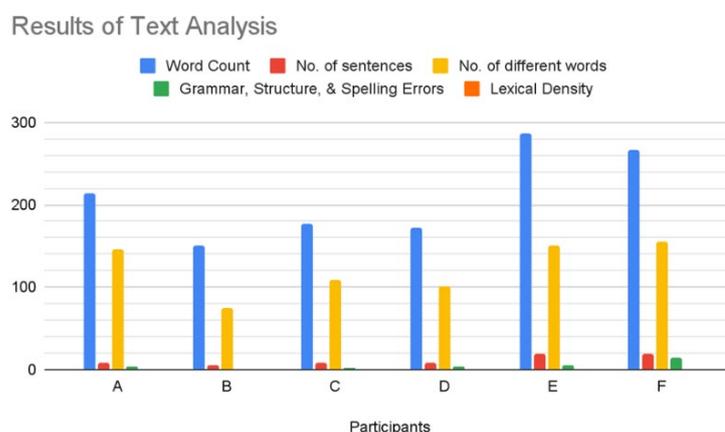


Figure 1.

Table 2: The text analysis of the introductory paragraphs of 6 students in 902-115 Reading & Writing Project in English

Native Speakers	Word Count	No. of sentences	No. of different words	Grammar, Structure, & Spelling Errors	Lexical density
Participant A	214	8	146	4	68.22%
Participant B	150	5	75	0	53.33%
Participant C	177	9	109	2	54.80%
Participant D	172	8	101	4	58.72%
Participant E	286	19	150	6	52.45%
Participant F	266	19	155	14	58.27%

Participant A's introduction contains eight sentences with an average length of 214 words. 146 different words were used. The mistakes in grammar errors, structure, and spelling such as unpaired quotation marks, lack

of capitalization of proper nouns, and long sentences was 4 instances. Their lexical density is the highest among all participants. Participant B's introduction contains five sentences with the lowest word count among participants of 150 words. 75 different words were used with no errors in grammar, structure, and spelling. The lexical density is at 53.33%. Participant C's introduction contains nine sentences with a word count of 177 words. 109 different words were used with two instances of grammatical errors, structure, and spelling. The lexical density is at 54.80%.

Participant D's introduction contains eight sentences with a word count of 172 words. 101 different words were used with errors in grammar, structure, and spelling of four instances. The lexical density is at 58.72%. Participant E's introduction contains 19 sentences with a word count of 286 words. 150 different words were used with errors in grammar, structure, and spelling such as unpaired bracket symbols, redundant phrases of six instances. Participant E has the lowest lexical of 52.45%. Participant F's introduction contains 19 sentences with a word count of 266 words. 155 different words were used with errors in grammar, structure, and spelling of 14 instances with 58.27 lexical density.

## 6. Discussion

The introductions of six participants are compared based on various factors such as word count, sentence structure, vocabulary, grammatical accuracy, spelling, and lexical density. Participant A used 214 words to construct their introduction of 8 sentences. They have the highest lexical density score of 68.22% using 146 different words, but with some grammar errors. Participant D has a lexical density of 58.72% with 172 words and 101 different words used, fewer than Participant A, with some grammatical errors. Although there is a 10% difference in the top two lexical density scores, it is the choice and variety of words that sets them apart. Participant A used more and diverse words to present their ideas precisely and clearly, while Participant D used fewer words and had less variety, possibly indicating a lack of necessary information and redundant words. Interestingly, Participant A has the highest lexical density among the native speakers, while Participant D has the highest lexical density among the non-native speakers. This may suggest that Participant D's limited vocabulary hindered their ability to present their topic effectively, unlike Participant A.

During the study, an interesting finding emerged regarding the participants' writing styles. Participant E used the greatest number of words, sentences, and a wide variety of word choices, yet scored the lowest lexical density at 52.45%. While Participant E has plenty of words, they do still have the lowest lexical density which can be attributed to an excessive use of words that do not portray the information clearly and concisely. On the other hand, Participant F had a similar writing style to Participant E, but with a higher lexical density score by 6%. However Participant F made more errors in grammar, spelling, and structure than Participant E. This difference between the participants is noteworthy as they have the same quantity of words but two very different lexical scores and errors. A contributing factor to this may be the respective native languages of each participant as languages each have their own phonological, grammatical, and syntactic structures (Kaplan & Palhinha, 1981). Participant E is of Venezuelan descent, making their native language Spanish and Participant F is of Chinese

descent, making their native language either Mandarin or Cantonese. Each of these languages have their respective root languages, Spanish is derived from Latin, similar to English but it still has its own syntactic rules which may contribute to their low lexical density. They may have used more words than needed to present the information accurately but had too many words that the information got buried in between resulting in the low score Participant E received. Mandarin or Cantonese are derived from the Sino-Tibetan language which has a completely different set of grammar, syntactic, and phonological rules which may contribute to Participant F's high number of errors made. Despite this, they still presented their information clearly and scored quite well compared to the other participants.

During the study, it was also observed that two native-speaking participants, Participant B and C, scored lower than the non-native speakers, except for Participant E, who scored the lowest of all. Although Participant B had no errors in their writing, they used very few sentences and lacked variety in their word choice, which could explain their low lexical density score. It is possible that they used too few words to accurately convey their information, resulting in insufficient information being presented in their written work. Participant C used only 27 more words than Participant B, but had more sentences and a greater variety of words used, yet they scored just over 1% higher than Participant B. Upon analyzing Participant C's written work, it was observed that their sentences were very long and contained more than 20 syllables in some sentences and included "lazy" words. "Lazy" words are fillers that are used intentionally or unintentionally to complete a sentence, it is similar to a verbal pause in speech (Feldman, 2016), and can significantly bring down a lexical density score as it carries no information, which could have contributed to Participant C's low score. It's worth noting that all other participants, except for Participant A and B, had "lazy" words in their written work. These observations may also be attributed to their education, as their writing abilities may have been influenced by factors such as uninspired teachers, lack of interest in their work, or lack of writing practice.

## **7. Recommendation**

There are several potential future studies that could be explored to create a better understanding about lexical density and how it affects the writing abilities of students such as pre-serviced TESOL teachers, or teachers themselves. While doing research for this case study, very little studies were available that directly relates to TESOL, pre-service teachers, or comparative information of lexical density in different English users. Future studies should strictly use comparable numbers of words analyzed. The disadvantage of this study is that the word count of non-native English teachers outnumbered the native speakers. In addition, future studies could incorporate correlations into the data to investigate lexical density to other language features such as structural and grammatical errors. Lastly, future studies could increase the scale of analysis by adding more participants into the project. It is hoped that this research could be used as a conceptual idea and starting point for writing researchers to build upon.

## 8. Acknowledgement

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## **English Academic Writing and References By ChatGPT**

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### **ABSTRACT**

Since ChatGPT was launched in 2018, there has been a lot of discussion about how it would affect education, particularly scholarly research. ChatGPT could help in academic writing, especially for non-native speakers as it can generate human-like phrasing. To assess the capability of ChatGPT, the authors conduct qualitative research by prompting ChatGPT to create academic articles in the humanities and sciences fields and evaluate its generated articles with library research techniques focusing on the dates and reliability of citations and references. The results show that ChatGPT generated well-written articles with citations, however, more than fifty percent of the references were false or fabricated. This means that while ChatGPT can be used in academic writing to give a framework in the initial writing process, humans would need to review every source, as well as edit and finalize the paper before publishing.

**Keywords:** ChatGPT, Chatbot, Academic Writing, Citation, References

### **1. Introduction**

The launch of ChatGPT in 2018 ignited discussions around the world in and out of technology. Scholars speculated how it would impact education and research. ChatGPT has been a useful tool for researchers in generating an initial draft, especially for non-native English researchers (Salvagno, Taccone, & Gerli, 2023). However, there have been many research papers that have claimed advantages and limitations of using ChatGPT in academic writing.

ChatGPT can generate natural language, coherent responses quickly and can handle many conversations simultaneously, which are its main advantages especially in businesses and organizations that provide customer

service (Kall & Smith, 2023). Moreover, ChatGPT can assist in scientific research such as analyzing data, and searching and summarizing relevant papers and articles (Bhatia, 2023).

Lo C.K. (2023) mentioned that essays created by ChatGPT were highly original and were able to bypass detection programs. Turnitin and iThenticate could only detect 13.72% and 8.76% respectively. However, according to Lo, many researchers noticed that ChatGPT generated incorrect or fake citations in subject domains such as mathematics, sports science, and psychology and health professions.

Similar to Lo, Stephen Turban (2022) said that his ChatGPT generated text did not give direct citations which made it hard to know who the original writer was. Moreover, he found out that ChatGPT might give the wrong information or fabricate an incorrect claim.

Reuben Shipway, Debby Cotton and Peter Cotton, the educators in England, did an experiment by submitting an academic paper written by AI and found out that the references don't exist (Wu, 2023). If scholars publish papers containing false information, this could damage the reputation of authors, colleagues, and peers. Therefore, this study focuses on the quality of the ChatGPT generated citations and references and whether they have been fabricated.

## **2. Objectives of the Study**

The main purpose of this study is to investigate the quality of the ChatGPT generated citations and references in academic writing.

## **3. Literature review**

### **3.1 Concept and Related Research**

#### **What is ChatGPT?**

In 2023, OpenAI, an American intelligence research laboratory, launched the GPT-4, an Artificial Intelligence-based language model with 175 billion parameters which can read, analyze, or generate very advanced text just like humans. ChatGPT could create all aspects of academic writing and publishing. It generates new ideas, hypotheses, questions, perspectives for authors, feedbacks, suggestions quickly and efficiently (Zohery, 2023).

In academic writing, ChatGPT could write an essay which perhaps even exceeds the average quality of a doctoral-level student. However, ChatGPT uses "Matthew Effect citation ranks which might be biased as it might lead to outdated articles" (D. Lund, et al., 2023). It uses a language which is linguistically correct and written in a high quality style; however, the summary and conclusions can be confusing and primitive (Mijwil, et al., 2023). It generates texts by giving credit to original authors with citations from published literature which is not considered plagiarism (Pertile, Moreira, & Rosso, 2015)

### **The Importance of Citations and References in Academic Writing**

Citations and references are essential in academic writing. Citations show the reader that certain material in the paper came from other sources. The correct references demonstrate the ethics of the authors. This is how the authors avoid plagiarizing. (Plagiarism.org, 2017)

Citations reflect an author's research process, whether they have deeply studied the topic, analyzed, and synthesized information systematically. Good and detailed referencing enhances an author's reputation amongst editors, reviewers, and readers. Citations help readers to study further. By reading an interesting article, readers could explore the topic by following the references provided in the article. (Aksnes, Langfeldt, & Wouters, 2019)

While common knowledge, generally accepted facts, or a writer's original ideas and experiences don't need to be cited (SJSU, 2023), other research, theories and findings should be cited and authors given credit. Moreover, there is no timeliness requirement to a citation as it might vary across different fields of study (Santini, 2018), (Aksnes, Langfeldt, & Wouters, 2019), (Chinn, 2019), but it is recommended to cite reliable, primary sources with the most current information whenever possible (Greenbaum, 2021).

### **3.2 Research Framework**

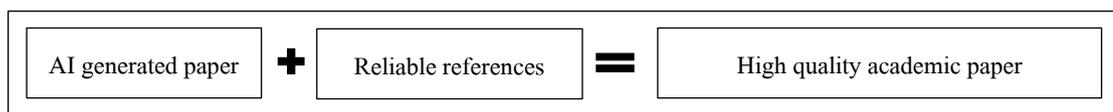


Figure 1 Research Framework

### **3.3 Research Hypothesis**

While AI may help researchers in some aspects of their work such as originality and bypassing plagiarism, references in academic writing are another important issue. Academic papers with references given from reliable sources benefit research and education.

## **4. Methodology**

This paper is descriptive, qualitative research and analyzes data with library research methods. The authors asked ChatGPT to write five academic articles in English on topics in the Humanities and Social Sciences field, such as English languages, cross-cultural, and teaching techniques, due to the authors' expertise.

1. Cultural Differences in Teaching English in Thailand
2. English Proficiency in Thailand
3. Active Learning in English Language Classroom
4. Communicative Language Teaching in English Language
5. Challenges in Teaching English in Thailand

Citations and references were checked in terms of existence, publication date, and citation rank to evaluate the reliability of the sources.

A citation's reliability was checked by reviewing search engine results, publishing sites, research databases, Journal archives, and Google Scholar, both with and without quotation marks "...". If ChatGPT generates texts from online mega data sources, we should be able to find the sources.

## 5. Research Findings

The aim of this research is to investigate the quality of the ChatGPT generated citations and references in academic writing. The authors asked ChatGPT to write five academic articles by prompting "write academic article with citation on...". ChatGPT generated articles in a few seconds with titles shown in table 1.

Table 1 Article title generated by ChatGPT from prompt "write academic article with citation on..."

	"write academic article with citation on..."	Generated article's title
1	Cultural Differences in Teaching English in Thailand	Cultural Differences in Teaching English in Thailand: A Cross-Cultural Perspective
2	English Proficiency in Thailand	English Proficiency in Thailand: Challenges and Strategies for Improvement
3	Active Learning in English Language Classroom	Active Learning in the English Language Classroom: Strategies and Impact
4	Communicative Language Teaching in English Language	The Role of Communicative Language Teaching (CLT) in Modern Language Education
5	Challenges in Teaching English in Thailand	Challenges in Teaching English in Thailand: An In-depth Analysis

Each article was well written and includes a title, abstract, introduction, details, conclusion, and citations.

Title: Cultural Differences in Teaching English in Thailand: A Cross-Cultural Perspective

Abstract:

Teaching English as a foreign language (TEFL) in Thailand requires an understanding of the cultural differences that influence instructional practices. This academic article examines the impact of cultural variations on teaching English in Thailand, addressing language learning styles, educational norms, and sociocultural factors. Drawing on existing research and scholarly works, this study highlights the significance of cross-cultural understanding in effective pedagogy and provides insights for English language educators working in Thailand.

1. Introduction

Teaching English in Thailand involves navigating cultural differences that shape the learning environment. This article aims to explore the influence of culture on English language instruction and its implications for educators in Thailand.

2. Cultural Dimensions and Language Learning Styles

Hofstede's cultural dimensions theory (Hofstede, 1980) provides a framework for understanding cultural variations in language learning styles. Thai learners often exhibit collectivist tendencies, emphasizing group harmony and face-saving (Kachru, 1983). In contrast, Western pedagogical approaches emphasize critical thinking, individualism, and classroom participation (Cortazzi & Jin, 1999).

3. Educational Norms and Teaching Methodologies

Thai educational norms, characterized by hierarchical relationships between teachers and students, impact teaching methodologies. The teacher-centered approach and reliance on textbooks are common in Thai classrooms (Duff, 2002). In contrast, student-centered and communicative language teaching methods are prevalent in Western contexts (Richards & Rodgers, 2001).

#### 4. Sociocultural Factors and Classroom Dynamics

Sociocultural factors such as respect for authority, social hierarchy, and maintaining harmony significantly influence classroom dynamics in Thailand (Mendoza & Rey, 2006). Teachers must consider these factors when establishing rapport, managing student behavior, and facilitating effective communication (Canagarajah, 2005).

#### 5. Language and Culture Integration

Integrating Thai culture into English language instruction fosters a deeper understanding of language and promotes cultural appreciation (Kramersch, 1993). Incorporating cultural elements into the curriculum enhances student engagement and motivation (Chalies & Mangubhai, 2014).

#### 6. Strategies for Effective Teaching

Cultural sensitivity is crucial in adapting teaching strategies to the Thai context (Kumaravadivelu, 2003). Developing intercultural communicative competence enables teachers to bridge cultural divides (Byram, 1997). Teachers should create culturally responsive lesson plans, incorporate Thai cultural content, and foster an inclusive learning environment (Matsuda, 2003).

#### 7. Professional Development and Training

Pre-service and in-service training programs should include cross-cultural competence and intercultural communication training for English language teachers in Thailand (Murray, 2000). Such training equips teachers with the necessary skills to navigate cultural differences effectively (Olivares-Cuhat & Barker, 2018).

#### 8. Conclusion

Cultural differences significantly impact teaching English in Thailand. Educators must recognize and adapt to these differences to create engaging and effective learning environments. By developing cross-cultural competence and integrating Thai culture into English language instruction, teachers can facilitate successful language acquisition and promote cultural understanding.

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Figure 1 Texts generated from ChatGPT prompt “write academic article with citation on Cultural Differences in Teaching English in Thailand” (generated on 20 May 2023).

Figure 1 is one of the five articles generated by ChatGPT. The authors prompted “write academic article with citation on Cultural Differences in Teaching English in Thailand.” There were 13 citations in the article which ranged between 1980-2018. There was one source, Byram, M. (1997), which was cited 10,620 times. Several sources were books. The authors checked the references presented in the article and the results are shown in table 2.

Table 2 References of citations mentioned in ChatGPT article prompt “write academic article with citation on Cultural Differences in Teaching English in Thailand.”

No.	ChatGPT references	Cited by	Comment on the source
1	Byram, M. (1997). Teaching and assessing intercultural communicative competence. <i>Multilingual Matters</i> .	10,620	There is a revised version published in 2020.
2	Canagarajah, S. (2005). Reconstructing local knowledge, reconfiguring language studies. In L. Wei (Ed.), <i>The Routledge Applied Linguistics Reader</i> (pp. 27-45). Routledge.	317	Published 1 <sup>st</sup> Ed. 2004 by Routledge. Could not find information about L. Wei (Ed.)
3	Chalies, S., & Mangubhai, F. (2014). Teaching culture in English classes: An ecological approach. <i>ELT Journal</i> , 68(2), 223-233.	n/a	Could not find the original paper in the Journal’s database. Moreover, there are only 220 pages in <i>ELT Journal</i> , 2014 Vol. 68 No.2
4	Cortazzi, M., & Jin, L. (1999). Cultural mirrors: Materials and methods in the EFL classroom. In E. Hinkel (Ed.), <i>Culture in Second Language Teaching and Learning</i> (pp. 196-219). Cambridge University Press.	book	Revised version in 2013. There is an article with the exact same name published by Dian Ekawati and Fakry Hamdani in 2012.
5	Duff, P. A. (2002). The discursive co-construction of knowledge, identity, and difference: An ethnography of communication in the high school mainstream. <i>Applied Linguistics</i> , 23(3), 289-322.	857	
6	Hofstede, G. (1980). <i>Culture's consequences: International differences in work-related values</i> . Sage.	n/a book	His framework is well-known and accessible from Hofstede organization’s website.
7	Kachru, B. B. (1983). <i>The Indianization of English: The English language in India</i> . Oxford University Press.	n/a book	
8	Kramsch, C. (1993). <i>Context and culture in language teaching</i> . Oxford University Press.	n/a book	
9	Matsuda, A. (2003). Incorporating cultural content into the English language curriculum: A Japanese case study. <i>TESOL Quarterly</i> , 37(1), 81-103.	609	
10	Mendoza, A. E., & Rey, M. D. (2006). Nonverbal communication: Discourse on touch in the Thai culture. <i>Journal of Asian Pacific Communication</i> , 16(2), 231-248.	n/a	Could not find the original paper on the internet or the Journal’s database. Searched in <i>Journal of Asian Pacific Communication</i> Vol.16, No.2 and could not find the article
11	Murray, D. E. (2000). <i>Preparing teachers for a changing world: What teachers should learn and be able to do</i> . Jossey-Bass.	n/a	Cannot find the book by Murray D.E. but found a book with the exact same title published by Linda Darling-Hammond, John Bransford (2005) cited by 6114
12	Olivares-Cuhat, G. A., & Barker, R. L. (2018). Intercultural competence in TESOL. <i>TESOL Quarterly</i> , 52(3), 607-633.	n/a	Cannot find the article with this exact name.
13	Richards, J. C., & Rodgers, T. S. (2001). <i>Approaches and methods in language teaching</i> (2nd ed.). Cambridge University Press.	book 690	

In terms of existence, according to table 2, four out of thirteen original references could not be found and one of them might show the wrong authors. Two of the references had revised versions. One of them showed the wrong published year. Only one reference was in the 5-year range; however, five of them were books from which a theory might be cited. Citation rates include Byram, M. (1997) 10,620 times, Canagarajah, S. (2005) 317 times, Duff, P. A. (2002) 857 times, Matsuda, A. (2003) 609 times, and Richards, J. C., & Rodgers, T. S. (2001) 690 times. The reference from Byram, M. which was cited by 10,620 was published in 1997.

Table 3 Percentage of false information from ChatGPT article prompt “write academic article with citation on Cultural Differences in Teaching English in Thailand.”

Results	Out of 13	Percent
Cannot find original publication	4	30.77
Have a revised version	2	15.38
Wrong published year	1	7.69
Total mistake in citation found	7	53.85

Table 3 shows the percentage of false information from the article “Cultural Differences in Teaching English: A Cross-Cultural Perspective” had a total seven false sources (53.85%). Four out of thirteen (30.77%) could not be traced back to the original sources. Two out of thirteen (15.38%) had a newer version, and one out of thirteen (7.69%) gave the wrong published year. Although scholars should cite the edition that is presented, the newer version should be crosschecked (McAdoo, 2021). Average citation rates were not considered as one of the papers published was from 1997 and was cited 10,620 times.

To get a more comprehensive assessment, the authors evaluated five academic articles written by ChatGPT and the result of the unreliable sources are shown in table 4.

Table 4 Percent of unreliable sources from the five articles generated by ChatGPT after the prompt “write academic article with citation on...”

	Article generated by ChatGPT after prompt, “write academic article with citation on...”	Number of references in the generated article	Mistakes of sources found after search through databases	Percent of unreliable sources
1	Cultural Differences in Teaching English in Thailand: A Cross-Cultural Perspective	13	7	53.85
2	English Proficiency in Thailand: Challenges and Strategies for Improvement	11	10	90.91
3	Active Learning in the English Language Classroom: Strategies and Impact	8	3	37.50
4	The Role of Communicative Language Teaching (CLT) in Modern Language Education	8	1	12.50
5	Challenges in Teaching English in Thailand: An In-depth Analysis	5	3	60.00
	Total	45	24	53.33

Three out of five articles generated by ChatGPT presented over 50 percent false sources. The second article “English Proficiency in Thailand: Challenges and Strategies for Improvement,” had the highest number of mistakes, as ten of eleven references (90.91%) could not be found. The first article “Cultural Differences in Teaching English: A Cross-Cultural Perspective” had a total of seven false sources (53.85%). The last article “Challenges in Teaching English in Thailand: An In-depth Analysis” also had a high percentage of unreliable sources (60%). The total error rate was 53.33%. Most of the mistakes from the ChatGPT’s articles were that the original references could not be found from databases, search engines, publishing sites, research databases, Journal archives, or Google Scholar.

## 6. Discussion

The main advantage of ChatGPT’s is it can create human-like text very quickly. However, with a total error rate of 53.33%, we can conclude that scholars should not trust ChatGPT in writing a whole academic article. The results are similar to many studies mentioned before. The references mentioned by ChatGPT are not reliable. Moreover, if scholars use ChatGPT in academic writing and do not check the references, these faulty sources will appear and be distributed to the public as “faulty” facts, which could impact further study.

## 7. Suggestions

ChatGPT is here to stay. However, using ChatGPT in academic writing might not help save time. When citations are incorrect, no original text can be found, and then a whole text needs to be rewritten and given new sources, which might take longer than writing the paper from scratch.

Use ChatGPT as an inspiration. ChatGPT could create a decent first draft and reduce the time a researcher needs to create an outline. A scholar could review, edit, or develop the solid text from it, and finalize the paper before publishing.

ChatGPTs’ reference list could be used as an initial source. Sources should be reviewed to explore further research on a similar topic.

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## **NFT ART: The Practice of Social Construction in The Art World**

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### **ABSTRACT**

As the well-known notion suggests, "Technology has reshaped social relationships," academia has witnessed numerous studies and debates on this subject. This paper aims to examine the landscape of NFT art within Thailand's online NFT community through content analysis methods. Its objective is to formulate a conceptual proposal illustrating how individuals and social groups can also influence technological evolution in response to market demands and user behavior.

This paper proposed that the social construction of the NFT art landscape in Thailand can be attributed to three primary factors: First, the influence of the traditional art world, deeply rooted in a patron-client relationship, has become noticeable; second, with the formation of NFT art community, new groups of actors has emerged; and third, the utilization of empirical discourse on social media to measure market sentiment shapes users' decision-making processes. Consequently, NFT trading platforms are bound to adapt to these user sentiments.

**Keywords:** Thailand, Online Community, Non-Fungible Tokens (NFTs), Social Construction, Art World

### **Introduction**

When examining social phenomena related to technology, the notion that "Technology changes social relationships of people" is often used. It stems from the doctrine of technological determinism, suggesting that alterations in technology, particularly in production, profoundly impact human social bonds (Bimber, 1990). The 1980s and 1990s saw the rise of the counterargument called the Social Construction of Technology (SCOT), which posits that technology is shaped by human actions, not the other way around (Bijker, 2015). Digital and blockchain technologies have been at the forefront of societal studies (CVVC.com). Horst and Miller (2012) highlighted that digital technology doesn't diminish human interactions but complements them. Contrary to concerns about reduced human interaction, digital technology acts as a reminder of our shared humanity. Daniel Miller's *"How the World Changed Social Media"* (2016) explores the concept of scalable sociality, encompassing societal dynamics, experiences, and emotions. For instance, users often manage diverse relationships on both Facebook and WhatsApp, showing that digital technology doesn't just alter social relationships but evolves alongside them.

Non-Fungible Tokens (NFTs) were invented from the concept of being assets with irreplaceable attributes on the blockchains. It's a digital scarcity. Non-Fungible assets include digital collectibles such as game cards, in-game items, land title documents, Identification documents, etc. The NFT industry, which has been a significant phenomenon since 2020, has attracted a market capitalization of approximately 16,195,881,711 dollars, making it the 8th largest category within the cryptocurrency sector as of May 30, 2023, with a daily trading volume of around \$795,535,309. This widespread popularity of NFTs goes beyond blockchain and cryptocurrency enthusiasts, extending to artists and collectors. It is a result of the growing exposure of blockchain and bitcoin technologies through various media outlets and online social platforms, which also allow people to gauge public sentiment. In Thailand, the "NFT and Crypto Art Thailand" community on Facebook has become one of the largest NFT communities, with 272,782 members as of June 14, 2023. Established in 2020, its primary purpose is to serve as a space for exchanging information related to NFT creation, supporting Thai artists, and providing investment insights and other NFT-related activities, both online and offline. This community differs from digital NFT communities in other countries in several ways. It maintains certain guidelines and has a hierarchical structure, distinguishing between creators, artists with existing reputations in the physical art world, and newcomers.

Over the past 3 years, the cryptocurrency market has seen a downturn following the COVID-19 pandemic, affecting both the cryptocurrency and NFT markets. The NFT art market's daily trading volume significantly decreased. For instance, on September 28, 2022, an NFT was sold for only \$22 million, while by September 25, 2023, an NFT's value had dropped to just \$200,000 (nonfungible.com). This statistic illustrates the NFT market's continuous evolution, which began gaining traction in 2020 and has seen substantial increases in value, followed by reductions in trading volume in recent years. As the market declined, more assets entered the market, and the number of NFTs and collections exceeded the number of buyers, leading some platforms to adapt and make changes that seemed to contradict the principles of digital asset scarcity and may not be favorable for artists. These changes included fractional ownership, free minting with no royalties, and adjustments in platform accessibility for high-end art sales.

The study hypothesizes that the Thai NFT community has actively shaped blockchain technology and NFTs' social construction. Blockchain, the foundation for NFTs, evolves through developer communities, altering social dynamics and regulations in the NFT art market. This article aims at understanding digital technology's transformative effect on social interactions and highlights social collectives as key agents in constructing a digital currency ecosystem. It contends that the NFT art sector represents a form of social innovation. In Thailand's NFT art landscape, social media discourse emotionally engages users with blockchain, cryptocurrencies, and NFTs, Furthermore, the Thai NFT art world has inherited certain elements from the Thai art sphere, such as the patronage relationships of its participants, along with the emergence of new actor groups alongside the traditional art scene.

An examination of the NFTs and Crypto Art Thailand community, which has emerged online over the past three years, adopts a sociological perspective. It is intriguing due to its focus on encapsulating certain traits specific to its members, often referred to as "Thainess." This community actively aids newcomers entering the

industry by offering support for purchasing artworks from Thai collectors. The primary goal is to elevate Thai artists to international prominence. Nevertheless, some aspects of the traditional Thai art patronage system are incorporated. This revolves around mutual assistance within the network, sabotage opportunities broadening for the public. The contradiction can be seen as it is opposed to the decentralized principles of blockchain technology.

Based on findings from existing literature, certain sociologists suggested that blockchain and cryptocurrencies are products of social construction (Redshaw, 2017). Consequently, this study seeks to examine the landscape of NFT art as a social construct. NFTs, stemming from the emergence and evolution of blockchain technology, are a fascinating subject of exploration. This article aims to enhance our comprehension of the social dynamics within the NFT art world and how these emotions play a crucial role in shaping the protocols, regulations, and trading platforms across the market.

To comprehensively explore Thai art worlds' shifts regarding NFTs, the concepts of art worlds, social construction, and social capital are utilized. The article is organized into three major sections: 1) the patron-client system in traditional art world, 2) The emergence of new group of actors in the NFT art, and 3) the social media discourse. The article is structured into three main segments: 1) The traditional art world's patron-client system, 2) The rise of a novel group of participants in the NFT art sphere, and 3) The discourse on social media platforms.

## **Objectives**

(1) To investigate the social construction of NFT art within the context of the art world landscape

(2) To explore the practice of the NFT online community in Thailand

### **1. The Patron-Client relationship in Traditional Art World**

Alan Bourdieu (1986) defined social capital, as articulated in his work, can be summarized as follows: *"Social capital is the accumulation of tangible or potential assets linked to having a stable network of more or less formalized relationships characterized by mutual acquaintance and recognition."* This definition underscores that social capital comprises two key elements: the actual social connections providing access to associates' resources and the volume and quality of these resources.

Considering elements such as trust, norms, and networks play a role in facilitating collective action and contribute to the development of the patron-client relationship. Its influence on contemporary relationships within Thai society is followed by the traditional patron-client relationship. The Sakdina system, which delineates an individual's social standing based on factors like family nobility, wealth, and educational achievements, remains highly influential. Social groups naturally unite among individuals of similar social strata who share common interests, nurturing strong interpersonal bonds within these groups. Becoming a client of a noble or a person of higher status entails aligning one's actions with those of the superior individual. (Rattanasripanya, 2011).

Howard Becker introduced the concept of Art Worlds (2008) emphasize the collaborative nature of artistic activities. In the art world, it's not just artists, art enthusiasts, and patrons who shape the landscape. Crucial participants like brokers and art critics play pivotal roles in influencing and setting artistic standards. Moreover, the traditional art worlds categorized artists into two groups: self-sustaining artists who supported their work through non-art-related occupations and those dependent on patronage. The relationship between artists and

patrons evolved with the increasing influence of corporate entities and galleries. Becker referred to this shift as the "dealer-dominated system," which expanded accessibility to the art worlds.

Virginia Henderson (1997) offered a critical perspective on Thailand's patron-client system concerning art landscape. The influx of foreign demand attracted capital and institutions as patrons, exerting a significant influence on art production and exhibitions. This trend echoes historical precedents where aristocracy played a pivotal role in shaping aesthetic preferences. Contemporary Thai art deviates from conventional narratives. It embraces local aesthetics that symbolize Thai culture. However, this shift has not been without criticism, especially regarding the use of "Thainess" for state agendas in a creative global economy. The transformation of the patron-client system has reshaped art patronage, with competition organizers and standardizers replacing traditional entities. This trajectory has internationalized Thai art by universalizing local expressions.

The example of Thai artist Jeap Prachakul's journey exemplifies this evolution. She started as a self-taught artist, funding her work through non-art-related day jobs. However, her trajectory took a significant turn when she gained international corporate patronage after winning the 2020 BP Portrait Award, becoming the first Asian recipient of this prestigious honor (BP.com). This recognition marked a shift in her artistic context, propelling her into the new patron-client system. This transition not only brought financial support but also facilitated exhibition opportunities. In contrast to many traditional Thai artists, who typically depended on traditional patrons and had to establish their social capital from their early years in art university, Jeap's multinational corporate connection detached her art from national and religious influences, paving the way for new artistic opportunities.

## **2. The Emergence of the NFT's New Groups of Actors**

This topic will explore the various groups of actors within the NFT art landscape. To begin with, the NFT marketplaces. NFT art initially emerged with the concept of rarity, making these digital assets highly sought after. NFT trading platforms emphasize the uniqueness and value of these works and often implement policies for secondary sales or artist royalties. This means artists continue to earn from the increased value of their creations even after the initial sale.

These marketplaces can be categorized into two types: curatorial and open-to-the-public. In curatorial platforms like Foundation, artists apply to sell their NFT artworks, but the platform selects artists and works based on specific criteria. In contrast, open-to-the-public marketplaces such as OpenSea allow artists or creators to list their work without prior selection., and artists can start selling their pieces directly after the crypto wallet activation. OpenSea, as one of the pioneering platforms, operates as an intermediary, like traditional art dealers or art galleries as Becker has mentioned.

Secondly, the artists. Including individuals and collaborative projects as the NFT creators. The collab projects involving developers, brands, marketing specialists, and community managers are also prevalent. This dynamic requires extensive collaboration among various stakeholders.

The third group comprises community managers who have played pivotal roles in shaping the Thai NFT community. Their primary objective is to foster a sense of "Thai kindness" within the community, where artists provide mutual support through guides and tutorials. This sets the Thai NFT community apart from foreign NFT communities. However, there is a noticeable patron-client relationship within the community, with some community managers favoring renowned artists. Algorithm-driven visibility plays a role, impacting engagement and influencing collectors' decisions, which raises questions about the fairness of these relationships.

Lastly, we have collectors, including both individuals and corporations, as well as social media content creators and marketers. These groups have entered the NFT space with the intention of profiting from their investments.

When considering the similarities and differences between the characteristics of the physical art world and the NFT art world, it is apparent that distinctions exist between these two art worlds. However, it is also noteworthy that commonalities persist between the two art worlds.

1. Shifting Space: The transition from tangible to virtual interaction is marked by blockchain transactions and metaverse engagement, bridging global participants without personal acquaintance.

2. Shifting Actors: The NFT art sphere introduces diverse actors, requiring artists to comprehend cryptocurrencies, blockchain mechanisms, and cybersecurity. Traditional intermediaries evolve into NFT marketplaces, engaging capitalists and developers in altered roles.

3. New Expertise: Beyond artistry, new roles like Community Administrators, Marketers, and Content Creators emerge, blending artistic creation with technical mastery.

4. New Product Mode: NFT art transforms art into a product encompassing the artwork, artists' story, and brand, with blockchain-backed art as a compelling feature.

5. Evolving Community Structures: Changing roles and expertise reshape the art community.

6. Emerging Social Capital: Unlike the traditional art world, NFT artists don't necessarily require formal education and develop new connection methods.

Similarities can be categorized into the following four domains:

1. The Use of Thai Virtues: Both traditional and NFT art communities reflect Thai values.

2. Racial Bonds: The sense of belonging tied to Thai identity is integral.

3. Capital Accumulation: Participation in capital accumulation remains a shared motive.

4. Pursuit of Artistic Recognition: Both art communities seek recognition through corporate patronage.

Both art worlds covertly contribute to the national creative economy, aligning with developmental agendas. Unrecognizable to players, their actions harmonize with the national economic narrative, capitalizing on preexisting Thai social capital in the new guise of the creative digital economy.

The comparative findings above reveals both differences and similarities between the traditional art world and the NFT art world. One notable difference lies in the expanded set of participants. In the NFT art landscape, there are new group of actors, including digital artists with graphic design expertise and individuals who have no prior involvement in traditional art. The definition of NFT art has evolved significantly from its

traditional meaning, requiring a broader skill set that goes beyond artistic talent and extends into the technical domain, involving an understanding of blockchain technology. Additionally, the emergence of a virtual community within the NFT world brings about a new ecosystem of relationships and interactions with different groups of individuals. This development shares some characteristics with the traditional patron-client relationship observed in the traditional Thai art world.

### **3. Social Media Discourse**

Since the sale of the NFT art called "Everydays: The First 5,000 Days", a creation of the artist who goes by the alias Beeple, have made the auction in a closure value of \$69 millions at the prestigious art auction house, Christie's in May 2022 (Christies.com). It gained substantial attention of the public not only the artist in the NFT world. It has become the third most valuable art auction globally for a living artist. The wave of excitement extends beyond the borders of the art world, capturing the interest of individuals across various fields, thus significantly beyond the traditional art sphere. (Whitaker & Abrams, 2023)

After this event, there was the progressive surge in the number of NFT collection portfolios on the Opensea, a leading and lucrative NFT marketplace during 2021. Chiananalysis (2022) reported that the count of traded NFT collections reached an all-time high of 3,264 by November of 2021, a remarkable surge from a mere 193 collections documented at the outset of March. Although a minor dip was observed in early November, the growth trajectory promptly rebounded and persisted until the year's end.

Peter Chow-White et al. (2020) conducted a study focusing on blockchain market sentiment driven by emotions and media discourse. They categorized specialized media as websites that emerged between 2014-2018, exclusively dedicated to blockchain technology, including bitcoinagile.com, bitcoinist.com, bitcoinmagazine.com, and coindesk.com. These websites catered to individuals already familiar with or involved in blockchain development. In contrast, mainstream media refers to well-known news agencies such as businessinsider.com, bloomberg.com, and fortune.com, which offer information to both the tech-savvy and the public.

The study examines how blockchain becomes a social construct, with its meaning shaped by media discourse. After analyzing 1,662 articles spanning 2014-2018, various perspectives on blockchain emerged, ranging from positive to negative. Among the most positive sentiments expressed by mainstream media were perceiving blockchain technology as a technological revolution, a profitability factor, an algorithmic tool, and a financial instrument. On the other hand, some articles viewed it as a bubble phenomenon, while the most negative sentiment associated with blockchain was its potential involvement in criminal activities. While specialized media exhibited a positive outlook on blockchain, envisioning it as a future revolutionary force in the financial domain.

This examination underscores the role of media in shaping perceptions of blockchain technology, reflecting a wide spectrum of views and emotions. Similarly, in the cryptocurrency market, user sentiment significantly influences decisions, as illustrated by the "Fear and Greed Index." This indicator draws insights

from social media activity, Google search trends, price volatility, and transaction volume, aligning closely with market shifts, highlighting the reciprocal interaction between market emotions and empirical data.

This connection is particularly evident during significant market events. For instance, the all-time high bitcoin price of \$68,007 in December 2021 coincided with a market sentiment of greed, registering 75 out of 100 on the Fear and Greed Index (Coinstats.app). This alignment emphasizes the reciprocal relationship between market sentiment and price dynamics. Additionally, the NFTs Fear and Greed Index, developed by NFTs.GUIDE, parallels the principles of the Crypto Fear and Greed Index, measuring emotions that influence investors' willingness to invest in NFTs. This index highlights the shared sentiment-market relationship that permeates both cryptocurrency and NFT markets.

Finally, the construction of social reality is shaped by media discourse, employing a range of media channels. These channels deliver empirical data that provokes emotional reactions from social media users. These emotional responses are then quantified and converted back into empirical data, ultimately impacting the interpretation, and forecasting of market trends.

## **Conclusion**

The NFT art landscape has ushered in a new form of patron-client relationship within the evolving art space. This article's findings highlight three key attributes that support the notion of it being a social construction. First, the emergence of a new patron-client relationship, inheriting from the traditional art world's model. Second, the evolution of new actor groups, stemming from the traditional art world, driven by the demand for skills related to blockchain technology. These new groups have catalyzed fresh interactions among various stakeholders. And third, the influence of social media discourse on users' sentiments towards the market, leading to adaptations in platform rules and regulations.

## **Suggestions**

1. Sociological and anthropological researchers may find it worthwhile to shape their investigations using the findings of this research, approaching blockchain technology and NFT art as a facet of social construction.

2. To reinforce the digital creative economy in Thailand and safeguard against fraud and forgery, public authorities should carefully consider the possibility of granting NFT art with a distinct legal standing as an asset, separate from cryptocurrencies, thereby extending support to Thai NFT art creators.

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## **The Development of Multimedia Teaching to Improve the Students' English-Speaking Skill of Chinese Primary Learners**

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### **ABSTRACT**

The objectives of this research are: 1) To design multimedia teaching of the students' English speaking. 2) To study Students' English speaking of Chinese Primary Learners after using multimedia teaching. and 3) To compare students' English speaking of Chinese Primary Learners before and after using multimedia teaching. The target group was 20 second grade students. The research instruments were pre and post-test, lesson plan for teaching speaking, 20 vocabularies, using multimedia teaching in English speaking skill. Data analysis were used mean, standard deviation, and t-test.

The results showed that :1) The activities of students using design multimedia in English teaching of the students' English speaking by using vocabularies include 5 steps, 2) The result of study Students' English speaking of Chinese Primary Learners after using multimedia teaching include; watching short English videos, practicing situational dialogues, learning to sing English songs were more than 60%, and 3) the results of the comparison of students' English speaking scores before and after the test showed that the scores after the test were higher than those before the test, and were statistically significant at a level of 0.01.

**Keywords:** multimedia teaching, teaching English

### **1. Introduction**

Since the beginning of the 21st century, with the development of the global economy, international communication has become more and more frequent. Although the status of Chinese has become more and more influential in the world, English is the most widely used language in the world. Therefore, in order to be in line with international standards, receive more foreign information and learn more knowledge, it is necessary to master foreign languages well. English, as the first international common language, is the language used by

most countries. If you can master English well and communicate with people fluently, then you can go to some developed countries, whether for work or study or travel, living is no problem.

However, the Chinese language system and the English language system are two completely different language systems. Therefore, it is often difficult for Chinese people to learn English. Because of the different language thinking, people are often interfered by the mother tongue system in the process of learning English, which affects the learning effect. Let your children learn English at an early age and instill language thinking in English when the mother tongue system is not very strong. Therefore, more and more Chinese children begin to be instilled in English by their parents after they are born, even when they are still in the mother, such as listening to English songs during fetal education and using English songs when sleeping. Some parents who are good at English even start to use English when they communicate with their children, but not all parents understand English. Therefore, a variety of multimedia English teaching has been used by parents and teachers in English language exercise, especially in primary and secondary school teaching, so this practice does have effect on the cultivation of children's English language ability.

## **2. Research Objectives**

1. To design multimedia teaching of the students' English speaking of Chinese Primary Learners.
2. To study Students' English speaking of Chinese Primary Learners after using multimedia teaching.
3. To compare students' English speaking of Chinese Primary Learners before and after using multimedia teaching.

## **3. Literature Review**

### **Part 1 Theories of spoken English skills**

1. Development of Teaching English in China with the rapid development of China's economy, the usage rate of English is gradually increasing, and there are more and more books on the theory of English teaching.
2. Primary schools and even kindergartens began to learn English in China. After understanding how the brain works, many Chinese parents give their children access to two language systems at the same time as they experience language thinking.

### **Part 2 Teaching English in China English Speaking Skill and Research related, and Teaching Theory in English**

1. English Speaking Skill and Research related 1) Language view and Language learning view 2) Language view 3) The Structural View of Language 4) The Functional View of Language and 5) The Interactional View of Language
2. Language learning view 1) The basic concept and significance of language learning view 2) The basic concept of language learning 3) Study the significance of the view of language learning. 4) Language learning theory; Behaviorist Theory, Cognitive Theory, Constructive Theory

3. Main schools of foreign language teaching methods 1) Grammar Translation Method 2) Direct Method 3) Audio-lingual Method 4) The Situational Approach 5) Cognitive Approach 6) Communication Approach 7) The Nature Approach 8) Total Physical Response 9) Task-based Language Teaching 10) Multiple Intelligences Approach; Verbal-linguistic Intelligence, Logical-mathematical Intelligence, Visual-spatial Intelligence, Musical-rhythmic Intelligence, Bodily-kinesthetic Intelligence, Interpersonal-social Intelligence, Intrapersonal-introspective Intelligence, Naturalist Intelligence

## 2. Teaching Theory in English

(1) Master the basic knowledge and skills of English and develop the basic principles of communicating in English.

(2) Student-centered, teacher-led, attach importance to emotional factors, and give students the opportunity to give full play to initiative and creativity.

(3) The principle of combining structure, function, and culture. Structure is the foundation, function is the purpose, and culture serves language teaching. The combination of structure, function and culture should run through the whole process of language teaching.

(4) Strengthen the English learning environment, increase English input and output, and combine independent learning with natural acquisition.

(5) Pay attention to the cultivation of language skills and communicative competence under the guidance of language knowledge.

(6) Comprehensive teaching of phonetics, grammar, vocabulary, and phrases, focusing on sentences and texts.

(7) Comprehensive requirements for listening, speaking, reading, and writing. Pay attention to the principle of stage coordinated development of spoken and written language.

(8) The principle of strictly controlling the use of mother tongue or media language through the comparative analysis of mother tongue and English.

(9) Step by step, spiral ascension; Strengthen the recursion principle.

(10) Strengthen intuitiveness and make full use of modern teaching technology principles.

**Part 3 The application of multimedia Teaching in English Teaching**—Multimedia Teaching and Research related.

1. The background of multimedia Technology in English Teaching.

2. Multimedia assisted teaching mode can promote the cultivation of students' independent English learning ability.

2.1 Multimedia technology facilitates students' independence.

2.2 Multimedia technology improves the efficiency of students' independent classroom learning.

3. The application of multimedia technology is helpful to the cultivation of students' English listening and speaking ability.

4. Problems arising from the application of multimedia technology in English teaching.

4.1 Multimedia functions have been weakened.

4.2 Excessive pursuit of sound and video effect can easily distract students' attention and dilute their mastery of teaching content.

4.3 In teaching practice, some teachers completely rely on the CD-ROM of the textbook, believing that it is simple and fast.

5. The solution to the problem of multimedia technology application.

5.1 Multimedia teaching lacks the advantages of traditional teaching, which is flexible and flexible.

5.2 Teachers should not use courseware in isolation and ignore the comprehensive application of each link in teaching.

5.3 Under the multimedia teaching mode, teachers should optimize and integrate advanced teaching methods with their leading positions in teaching.

### 3.1 Theory, Concept and Related Research

Based on multimedia teaching, short videos, situational dialogues and songs are used to teach English speaking skill to 20 students in Grade 2 of an ordinary primary school in China. Similar to Andi Tenri Ampa (2013) "*The Implementation of Multimedia Learning Materials in Teaching English Speaking Skills*", the purpose of this study is to determine that using multimedia learning materials can improve students' oral English skills. from three classes of English Department of Unismuh Makassar were taken as the participants. They were taught English speaking skills using multimedia: video, audio, text, picture, animation, and interactivity. Sixty students took part in the study. This research method is qualitative. Data collection was carried out by distributing a related questionnaire and test to 60 students attending the listening course. Through data analysis, we can see the progress of students' oral English skills in the process of activities, and researchers use tabular data. The results show that multimedia learning materials are effective to development English speaking skills.

### 3.2 Research Framework

Multimedia teaching is the independent variable and student achievement is the dependent variable. The relationship between the two is that if multimedia teaching is effective, it can rapidly improve students' oral English ability in a short time.



Figure 1 Research Framework

### 3.3 Research Hypotheses

Students' English-speaking skills of Chinese primary learners after using multimedia teaching is higher than before.

#### 4. Research Methodology

Research design with Pre-experimental Research this section as follows: 4.1) Research Design and 4.2) Target group.

##### 4.1 Research Design

This research is a Pre-Experimental Research by using One group pre-test post-test Design with the design as follows:

testing	experiment	testing
T1	X	T2

Symbols in Research Design:

- T1 Pre-test Students' English Speaking
- X Multimedia Teaching in English speaking
- T2 Post-test Students' English Speaking

##### 4.2 Target Group

Target group: A class of 20 pupils in Grade 2 of an ordinary primary school in China. Age: 7-8 years old, Proficient in spoken English.

##### 4.3 Research Instrument

- 1) Research Instruments were Pre-test and Post-test, divided into two parts.
- 2) Teaching media: YouTube and multimedia teaching; short videos, situational dialogue, songs.\
- 3) The theme is: Means of transportation and Locations vocabulary.
- 4) The content of the test is used a sample of 20 words from English Level 2.
- 5) Grading criteria: Grade assessment.

##### 4.4 Data Collection

The researchers taught English vocabulary to grade 2 students at a primary school in China. There are four lessons in four days, one lesson per day, 45 minutes each.

1. The lesson plan contains of 20 English words, divided into two parts: vehicles and place nouns. A vehicle is 10 words, a place noun is 10 words.
2. Before the test, take a simple speaking test with 20 words.
3. Then the teacher will use multimedia technology (mainly YouTube) to teach these words in class, such as watching short videos, watching situational dialogues, and singing English songs. A class lasts 45 minutes.
4. Take the oral test after class, and score according to the grade standard, with the highest score being 10.

#### 4.5 Data Analysis

Descriptive statistics involving mean and standard deviation. The researchers conducted pre - and post-tests on Grade 2 students from a target group of primary schools in China, using a dependent t-test that made comparative score analysis possible. Two vocabulary tests were given at the grade 2 level, each of which was given to 20 students.

### 5. Research Findings

1) The activities of students using design multimedia in English teaching of the students' English speaking by using vocabularies include 5 steps as follows:

1.1) The teacher taught 20 words and then gave a simple test. Record the student's current score, 1.2) Teachers use multimedia equipment, such as You Tube, and short videos related to transportation in class and tell students to listen carefully and write down the words about transportation in the short video. (Play each short video three times). 1.3) the students are divided into 5 groups and have a group discussion. Then the students are asked to say the words they hear. There is a competition between the groups to see which group speaks the most. 1.4) arrange for the students to have situational dialogue exercises. First, let the students watch the situational dialogue short films three times for each English short film, and then ask the students to design a scene to simulate the situational dialogue with the words they have learned, and pronounce them accurately and fluently. The students will choose which group does the best. And finally, 1.5) after the fierce competition, the teacher plays an English song to adjust the students' mood, the English song is best connected with what the students learn, the students can try to sing along.

2) The result of study Students' English speaking of Chinese primary learners after using multimedia teaching in vocabularies include watching short English videos, practicing situational dialogues, learning to sing English songs, as showed in Table 1

Table 1 Result of the Students' English speaking after using multimedia teaching.

	Watch short videos	Situational dialogue	Sing English songs
Vocabulary	8.3	8.1	6.6
Pronunciation	7.5	7.6	7.1
Oral	8.1	8.4	6.7

3) the results of the comparison of students' English-speaking scores before and after the test showed that the scores after the test were higher than those before the test and were statistically significant at a level of 0.01.

Before the test, the average score of the students was around 4.5, but after the test, the average score of the students reached 7.6. The comparison results show that the overall performance of this class is improved.

Overall grades have improved, with post-test scores significantly higher than pre-test scores. It shows that multimedia teaching can be improved students' speaking skills.

Table 2 Compare scores before and after learning.

Testing	N	$\bar{X}$	S.D.	t	sig
Before	20	4.47	0.20	27.53**	0.000
After	20	7.59	0.53		

\*\* statistically significant at a level of 0.01

N refers to Target group.  
 $\bar{X}$  refers to mean number.  
 S.D. refers to standard deviation.  
 t refers to t-test dependent.

## 6. Discussions

Part One: The activities of students using multimedia teaching to teach Chinese students' English-speaking skill and study their value.

Students are already interested and engaged in using multimedia technology, which creates many amazing opportunities for schools and teachers to make teaching and learning more effective by integrating some forms of multimedia technology into the classroom. This also requires our teachers to have updated teaching concepts and teaching objectives, in the choice of teaching media to keep pace with The Times, and constantly innovate. Related to Ampa (2013) The Implementation of Multimedia Learning Materials in Teaching English Speaking Skills, the results show that multimedia learning materials can improve students' oral English ability. and Falola and Jolayemi (2020) Impact of Multimedia Technology on the Teaching and Learning of Oral English in Osun State Secondary Schools, Nigeria. The results show that multimedia teaching technology is of great help to the improvement of students' oral English, Mestre (2012) Pedagogical considerations for tutorials in Designing Effective Library Tutorials. Research shows that creating meaningful content and incorporating sound online instruction are essential conditions for effective multimedia instruction.

Part Two: Comparing students' overall academic performance before and after multimedia teaching.

As can be seen from the comparison results, the score of the post-test is higher than that of the pre-test, so the use of multimedia teaching is conducive to improving students' scores. As a kind of auxiliary teaching means, multimedia teaching is indispensable in modern teaching. Since the use of media in students' lives is very common, teachers' use of media in school classrooms is closer to real life. Use teaching media to learn English vocabulary and improve students' academic performance. Using the intuitive teaching method, students scored higher in the post-test than in the pre-test. It is obvious that the use of multimedia is beneficial to students' academic performance. Related to Xun (2010) wrote in the Present Situation and Objectives of Chinese Teaching,

Introduction to Teaching Chinese as a Foreign Language, the classroom is the main place for teaching. It emphasizes the importance of classroom teaching.

## 7. Suggestion

### **Suggestion for using the results of this research:**

1) Teachers should encourage students to use multimedia technology to develop their language skills. Multimedia teaching plans must be closely integrated with curriculum standards.

2) When integrating educational resources in the classroom, teachers should know which educational methods are most effective.

3) Teachers should compile textbooks that combine with multimedia teaching. These materials should focus on teaching and learning, not just technical issues.

4) Teachers should find ways that technology can help them achieve student-centered instruction rather than teacher-centered instruction.

5) Teachers should be aware of their role as facilitators and facilitators of learners' learning.

6) Grasp the topics that students are interested in, clarify the teaching objectives, and design the teaching content suitable for students' current learning level.

### **Suggestion for Future Research:**

1) Make full use of multimedia resources, such as pictures, videos, audio, etc, to make the class more interesting, vivid, and inspiring.

2) Teachers should pay attention to cultivating students' innovative thinking ability, let students actively participate in class activities, and improve learning interest.

3) Combined with the actual situation, the flexible use of multimedia technology, grasp the rhythm of many media teaching, so that students have a better learning experience.

4) Technology is changing the way people have been taught in the past, and the use of multimedia in the classroom will help students prepare for the digital future.

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**The relationship of Chinese Grade 5 Students' Interest in Foreign languages,  
Attitudes Toward Learning English and English Academic Achievement in  
Learning English**

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**ABSTRACT**

This study was conducted to determine whether there was a significant relationship among interest in foreign languages, attitudes toward learning English and English academic achievement of Grade 5 students at a public elementary school in China. The target population was Grade 5 students who were learning English at a public elementary school in China during the 2021-2022 school year. The first research instrument utilized was a survey questionnaire measuring students' interest in foreign languages and attitudes toward learning English as a foreign language. It consisted of a 20-item questionnaire with 10 items measuring interest in learning English and 10 items measuring attitude toward learning English. The instrument was adapted from Gardner's (2004) international version of the Attitude/Motivation Test Battery (Gardner, 2010). The second research instrument was the research school's 2021-2022 English final test for Grade 5 students. The data was analyzed through descriptive statistics (i.e., means and standard deviations) and correlational analysis using multiple correlation coefficient. The findings from the Questionnaire showed that Grade 5 students had moderately high interest in English learning and also moderately high attitudes towards English learning. The findings showed a significant relationship between interest in English learning and attitudes towards learning English. There was also a significant relationship between interest and attitudes toward learning English with English academic achievement. Based on these findings recommendations are given for students, teachers, school administrators, and future researchers.

**Keywords:** A Public Elementary School in China, Interest in Foreign Languages, Attitudes Toward Learning English, English Academic Achievement, Grade 5 Students.

## **1. Introduction**

Due to globalization, English has occupied a dominant position in foreign language teaching in China (He Na., 2010). Moreover, in response to globalization and the market economy, in 2001, the Chinese Ministry of Education reformed basic education making English a compulsory course from Grade 3 of primary school (Guo et al., 2013). Given the increase in the number of English learners in China, the factors that affect the language learning process have attracted attention. According to Gardner (1985b), two factors that affect second/foreign language acquisition are learning interest and attitudes toward learning English. Gardner (1985b) believed that learning interest and learning attitude have a an important impact on students' academic performance, because learning interest can stimulate students' desire to learn, and a positive learning attitude will promote the learner's learning process, which will have a positive effect on the results.

The researcher visited the target school to observe and question the Grade 5 students. Many of them did not have much interest in learning English. The Grade 5 teacher mentioned that students who showed negative attitudes toward English learning also did not do well in English.

For these reasons, this study focused on the relationship between Chinese Grade 5 students' interest in foreign languages and their learning attitudes toward English as a foreign language with academic achievement in Kunming, Yunnan Province, China.

## **2. Research Objectives**

(1) To determine the level of interest in foreign languages in Grade 5 students at a public elementary school in China

(2) To determine the level of attitudes toward learning English as foreign language of Grade 5 students at a public elementary school in China.

(3) To determine the level of English as foreign language academic achievement of Grade 5 students at a public elementary school in China.

(4) To determine if there is a significant relationship of learning interest in and attitude toward learning English as a foreign language with English academic achievement of Grade 5 students at a public elementary school in China.

## **3. Literature Review**

The following sections present Gardner's Socio-Educational Model of Second/Foreign Language Acquisition (1985) and related variables as well as the concept and related research of this study, followed by the research framework and the research hypothesis.

### 3.1 Theory, Concept and Related Research

#### Socio-Educational Model of Second/Foreign Language Acquisition (Gardner, 1985)

Gardner (1985a) believed that, among other important variables, individual differences of learners directly affect L2 learning motivation. These differences include students' interest and attitude toward learning a foreign language as well as their learning outcomes.

#### *Gardner's Construct of Integrative Motive*

Integrative motivation is influenced by several factors among which are integration with the foreign language culture which includes interest in that culture as well as positive attitude towards learning situations in learning that language and culture, which together influence a learner's level of motivation to learn the language (Dörnyei and Ushioda, 2011). The model posits that integrativeness factors (the individual learner's interest and desire for social interaction with the target language-speaker group) and attitudes to the learning situation are important factors that affect motivation for learning the language.

#### *The Socio-Educational Model*

Gardner's socio-educational model is based on motivation. The model shows that in the process of learning a second/foreign language, there are two main variables that vary among learners, namely, a learner's ability and motivation. Personal language acquisition achievement is closely related to these two main variables. Individuals' motivation to learn a second/foreign language is mainly related to two variables, integrativeness and attitudes to the learning situation. The third variable that affects language achievement is instrumentality (Gardner, 2006). Motivation can regulate instrumentality and integration, and these three variables are positively correlated, which means that if a learner has a high degree of integration, the learner will also maintain a positive attitude. Gardner (1985a) thought that interest in a foreign language is integrativeness, which suggested that interest in learning English has a positive impact on attitude towards English learning. Attitude toward learning English also affects level of motivation to learn a language. Gardner (1985a) defined personal attitudes as subjective evaluations of referents based on personal perceptions.

### 3.2 Research Framework

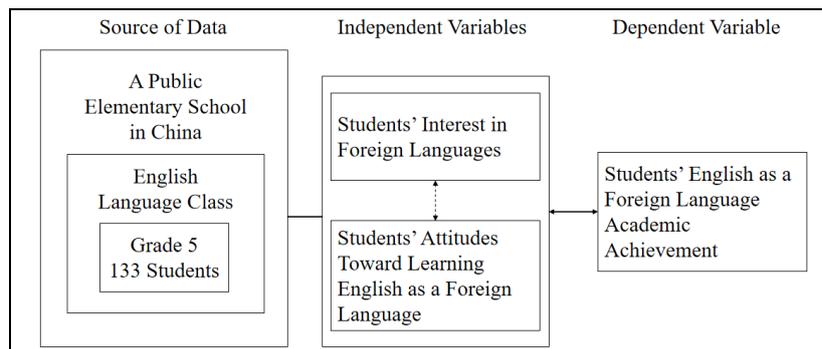


Figure 1 Conceptual Framework of the Study

### 3.3 Research Hypotheses

There is a significant relationship of Chinese Grade 5 Students' Interest,, Attitudes Toward Learning and Academic Achievement in Learning English as a Foreign Language of Grade 5 students at a public elementary school in China, at a significance level of .05.

#### **4. Research Methodology**

This research was a quantitative correlational research design.

##### **4.1 Research Design**

The purpose of this study was to investigate the relationship among interest in foreign languages, attitudes towards learning English as a foreign language and English academic performance among Grade 5 students in a Chinese public primary school.

##### **4.2 Population and Sample**

The target population of this study was 221 Grade 5 students, who attended English as foreign language classes in 5 different classrooms at a public elementary school in China in the 2021-2022 academic year. The sample included a total of 133 students in Class 1, Class 2, and Class 3. The 3 classes were selected because the teacher of those classes is a friend of the researcher who agreed to assist with the data collection.

##### **4.3 Research Instrument**

The research instrument used in this study was The Students' Interest in Foreign Languages and Attitude Toward Learning English as a Foreign Language Questionnaire. The questionnaire was adapted from Gardner's (2004) international version of the Attitude/Motivation Test Battery (Gardner, 2010). To measure the two main variables of this research, 20 items from the AMTB were used to measure Interest in Foreign Languages (10 items) and Attitudes Toward Learning English (10 items). The total 20 items from the two subscales were both positively and negatively worded.

To measure the level of interest in and attitudes toward learning English as a foreign language, a Gardner's 7-point Likert scale with positively worded items ranging from 1 (strongly disagree) to 7 (strongly agree), and negatively worded items ranging from 7 (strongly disagree) to 1 (strongly agree) was used.

The target school for the English as a Foreign Language Academic Achievement Test for Grade 5 students are measured by final exam results in the English as a Foreign Language subject for the 2021-2022 school year. The test assesses the students' listening skills (i.e., listening comprehension and choosing correct answers), reading skills (i.e., choose different pronunciations of words, reading passages and filling in the blanks), writing skills (reading through and writing answers, essay writing). The test paper has a total score of 100 points and is divided into 3 parts. The first part is listening with a total score of 40 points, the second part is basic knowledge, a total of 35 points, and the third part is reading and writing, a total of 25 points.

##### **4.4 Data Collection**

To collect data, the researcher translated Gardner's 2 subscales used in the research (employing back translation to check for validity) to create a questionnaire in Chinese for the Chinese English teachers in China who assisted the researcher. A total of 133 questionnaires were distributed and 133 usable questionnaires were returned, with a recovery rate of 100%.

##### **4.5 Data Analysis**

Descriptive statistical analysis and correlational analysis were carried out through use of a statistical software package.

## 5. Research Findings

The research findings derived from the data collection and analysis are presented in accordance with the research objectives.

Table 1 below summarizes the findings for Objective 1. The overall mean score of students' interest in foreign languages was 5.40 which was interpreted as moderately high on the research interpretation scale of 5.01-6.00. The questionnaire item which had the highest mean score of 5.83 was - *I wish I could speak many foreign languages perfectly. I enjoy meeting people who speak foreign languages* had the lowest mean score of 4.78.

Table 1 Grade 5 Students' Overall Mean Scores, Standard Deviations and the Interpretations of Interest in Foreign Languages Subscale Items (N =133)

Item wording	No.	Item	M	SD	Interpretation
Positively worded items	1	I wish I could speak many foreign languages perfectly.	5.83	1.49	Moderately high
	4	I wish I could read newspapers and magazines in many foreign languages.	5.02	1.93	Moderately high
	5	I enjoy meeting people who speak foreign languages.	4.78	2.01	Slightly high
	7	I would really like to learn many foreign languages.	5.17	1.83	Moderately high
	11	If I planned to stay in another country, I would try to learn their language.	5.66	1.80	Moderately high
Negatively worded items	2	Studying foreign languages is not enjoyable.	5.15	1.89	Moderately high
	8	I really have no interest in foreign languages.	5.48	1.71	Moderately high
	10	It is not important for us to learn foreign languages.	5.76	1.50	Moderately high
	14	I would rather see a TV program dubbed into our language than in its own language with subtitles.	5.62	1.55	Moderately high
	16	Most foreign languages sound crude and harsh.	5.53	1.68	Moderately high
Overall			5.40	1.74	Moderately high

Table 2 below summarizes the findings for Objective 2. The overall mean of Grade 5 students' attitudes toward learning English as a foreign language was 5.35 was interpreted as moderately high in the research interpretation scale of 5.01-6.00. The questionnaire item which had the highest mean score of 5.98 was - *Learning English is a waste of time, I love learning English* had the lowest mean score of 4.95.

Table 2 The Grade 5 Students' Overall Mean Scores, Standard Deviations and the Interpretations of Attitudes Toward Learning English as Foreign Language Subscale Items (N =133)

Item wording	No.	Item	M	SD	Interpretation
Positively worded items	3	Learning English is really great.	5.20	1.75	Moderately high
	9	I really enjoy learning English.	5.10	1.97	Moderately high
	13	English is a very important part of the school program.	5.89	1.44	Slightly high
	17	I plan to learn as much English as possible.	5.10	1.91	Moderately high
	19	I love learning English.	4.95	1.95	Slightly high
Negatively worded items	6	I hate English.	5.62	1.63	Moderately high
	12	I would rather spend my time on subjects other than English.	5.10	1.71	Moderately high
	15	Learning English is a waste of time.	5.98	1.32	Moderately high
	18	I think that learning English is dull.	5.13	1.91	Moderately high
	20	When I leave school, I will give up the study of English because I am not interested in it	5.42	1.93	Moderately high
Overall			5.35	1.75	Moderately high

Table 3 summarizes the findings for Objective 3. The mean score of Grade 5 students' English academic achievement was 91.07 and interpreted in the scale of 90%-100% as excellent. The lowest score was 41 and the highest score was 100, so there was a large gap between the scores of students.

Table 3 Grade 5 Students' Means and Standard Deviations for Grades 5 Students' English as Foreign Language Academic Achievement Score

Grade level	N	M	SD	Interpretation	Minimum scores	Maximum scores
Grade 5	133	91.07	12.85	Excellent	41	100

Table 4 below shows the correlation between students' interest in foreign languages and attitudes toward learning English as a foreign language and English as a foreign language academic. It demonstrates a significant, very strong correlation between the two independent variables and one dependent variable whereby  $R = .91$ ,  $F(2,130) = 311.91$ ,  $p < .05$ . The correlation coefficient obtained reveals that the two independent variables accounted for 83% of the variance of the dependent variable,  $R^2 = .83$ .

Table 4 Multiple Correlation Coefficient of Students' Interest in Foreign Languages and Attitudes Toward Learning English as Foreign Language with English Academic Achievement

Variables	R	R <sup>2</sup>	dfs		F	p
			Total	Residual		
Independents						
1. Interest in foreign languages	.91	.83	2	130	311.91	< .05
2. Attitudes toward learning English as foreign language						
Dependent						
English academic achievement						

## 6. Discussion

### Relationship between Students' Interest in Foreign Languages and their English Academic Achievement

The findings from the first research objective indicated that Grade 5 students in the target school had a moderately high level of interest in foreign language learning. The survey results also showed that students' interest in learning English was related to the importance of English to them, and students who thought that learning English was very important had a higher interest in learning. Students with high interest learn more than those with low interest (Ginting, 2021).

Gardner (1985) argued that interest in learning a foreign language has a positive impact on attitude towards learning that language. This current study has shown that to be the case for the study subjects' English learning as well. Interest is both an important motivational process and a psychological state. Students' interest plays a key role in the learning process (Amelia & Lailatul, 2017). Students in the target school were overall interested in learning English, and most of them expressed their hope that they could speak English fluently and wanted to travel to different countries or go to study, hoping to read more foreign newspapers or magazines. Students with high interest in English learning had better English performance. This result is consistent with the research of Goni et al. (2021), who found that students' interest in English learning is positively correlated with academic performance.

Cultivating students' interest in language learning is a factor for students' success in language learning (Amin, 2019). The findings of the current study show that students who are more interested in English learning have better English scores. According to the discussion between the current researcher and the target classroom teacher, because the target students were in China, the students who were less interested in English learning thought in that way because they did not have many opportunities to engage in using English outside the school, and their parents did not know English, so the opportunity to learn English was only at school. The students said that before elementary school there was no exposure to English at all, so they had no opportunity to use

English and were not required to communicate in English in their daily lives. Yusriyah et al. (2021) also showed that students' interest and enthusiasm are significantly related to English performance.

### **Relationship between Students' Attitudes Toward Learning English as a Foreign Language with English Academic Achievement**

The finding of the second research objective indicated that the Grade 5 students displayed moderately high attitude towards English learning. Smith (1971) believed that attitudes are situational, and the attitudes towards foreign language learning are related to the students. If students' attitudes towards language learning are neutral or even positive when they enter the classroom, then their learning outcomes during the learning process will more likely be positive. Findings from the second research objective indicated that Grade 5 students in the target school had a moderately high level of attitudes toward learning English as foreign language.

According to Orfan's (2010) research, students with English learning experience are more positive than students without English learning experience. The target school selected by the researcher was a public elementary school and, since the target students were Chinese, English was not their mother tongue and most had had little exposure to English. The English course was only offered in the third grade, and the target grade in the current study was the fifth grade. After two years of English learning, the students had different English scores. The researcher learned from communication with the target students that among the students who achieved excellent results, most of them enjoyed watching English cartoons or reading English picture books. Some students said that they also participated in extracurricular English training classes in addition to school courses. These students were able to achieve better English scores and perform better in English classes.

As one of the three major subjects of Chinese education, English language is equally important as Chinese language education. Students who have a positive attitude towards learning English are willing to spend more time learning English because they enjoy learning and speaking English, while students who leave school want to continue improving their English skills. For students who have a negative attitude towards learning English, although they also think that English is very important, they think that they will not use English after graduation, so they should just keep their English scores above the middle level.

## **7. Suggestions**

(1) Teachers should actively stimulate and engage students' interest, and let students learn actively, and through positive achievement in real English language use, change students' attitudes towards English learning. Teachers should also pay more attention to students who have negative attitudes towards English learning and give them more care and understanding. Therefore, it is recommended that teachers try to create teaching situations in classroom teaching, design some difficult and suitable questions according to the differences in students' actual levels, and seize the opportunity to stimulate and inspire their learning. In the classroom, teachers should fully mobilize students' enthusiasm and initiative in learning, improve students'

interest in learning, change students' attitudes in learning English, and let students take the initiative to learn English in ways they are comfortable with and engage in topics in English in which they are interested..

(2) The researcher suggests that students can take the initiative to use English to communicate with English teachers in simple daily communication when they are in school, and not be afraid of mispronunciation of words or grammatical errors. Encourage students in various positive ways to follow class processes that are engaging, and actively answer questions in English. At home, students can watch some relatively simple English cartoons to improve English vocabulary and increase their interest in English learning.

(3) School administrators should support the work of teachers and should be aware of the different factors that lead to students' interest and attitudes towards learning a foreign language and which factors can affect their academic performance.

(4) Future researchers may consider applying larger sample sizes to investigate students' interest and attitudes towards foreign language learning; for large samples, the results will be more reliable and will provide broader findings.

## 8. Acknowledgements

I would like to thank my parents for their complete support during my studies and their great help both spiritually and financially. Second, Asst. Prof. Dr. Richard Lynch gave me comprehensive and detailed guidance on the completion of my thesis. Finally, I would like to thank the target school administrators, teachers and students without whom I could not have completed this research.

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## **A Study of Student's Skill In Listening and Speaking By Using Activities-Based Learning for Jin Shi Primary School Students, Yunan Province, China**

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### **ABSTRACT**

The purposes of this research were to: 1) design Student 's skill in listening and speaking activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China, and 2) to compare the students' skills in listening and speaking before and after using activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China.

The target group was 20 first grade students. Research instruments were as follows: 1) the pre- test and post-test, and lesson plan for teaching listening and speaking, 2) Refresh students' impressions of words through games, songs, and 8 vocabulary word cards, pictures and song. Data analysis was used mean, standard deviation, and t-test.

The results revealed that: 1) the results of using activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China, the activities-based in this research using games, vocabulary cards, pictures, and song, and 2) the students' skills in listening and speaking after was higher than before using activities-based learning in English teaching with statistically significant at a level of .05.

**Keywords:** Listening and Speaking, English teaching, Activities-based learning.

### **1. Introduction**

Primary school English education typically includes the following subjects and topics:

Learning English well in elementary school.

The phenomenon of "dumb English" is common among primary school students in Kunming, Yunnan Province, China, so encouraging students to speak English is not only conducive to the improvement of oral English, but also conducive to the progress of listening.

Communication: English is one of the most widely spoken languages in the world, and proficiency in the language can help children communicate effectively with people from all over the world.

Writing: Students will learn how to write in different styles, such as narrative, descriptive, and persuasive. They will also learn how to organize their ideas and structure their writing.

Speaking and Listening: Students will develop their communication skills by participating in discussions, presentations, and debates.

Thomas, P. (2006) in "Exploring language structure: In A student's guide, Designed for those beginning to study linguistics, this is a lively introduction to two key aspects of the structure of language: syntax (the structure of sentences) and morphology (the structure of words). Exploring Language Structure explains linguistic concepts by using clear analogies from everyday life.

Language Structure: Students will learn about parts of speech, including nouns, verbs, adjectives, adverbs, pronouns, and prepositions.

Vocabulary: Students will learn new words and phrases, including synonyms, antonyms, and homonyms.

Spelling: Students will learn how to spell words correctly and use spelling rules and patterns.

Jun, X. (2010) mentioned in "On the problems and strategies of multimedia technology in English teaching" that the rapid rise and development of information technology provides a better paradigm for exploring new teaching models. Therefore, multimedia technology plays an important role in English teaching. However, some teachers rely too much on technology, leading to drawbacks in the teaching process. In order to make more effective use of this technology in English teaching, teachers should also fully interact with students to give full play to its practical value.

Most of the students prefer their own mother tongue, because they can understand it, which greatly reduces their sensitivity to English for unfamiliar and not commonly used languages. It reduces the interest in learning English, which leads to the decrease of students' English level.

Four skills in English are listening, speaking. Kornwipa,P. (2017) as in "Enhancing English skills through project-based learning". The study investigated learners' perceptions of (1) implementing project-based learning in the language classroom to encourage learners to use their language skills and knowledge of specific learning areas to complete tasks, and (2) how project-based learning can improve their four English skills (i.e., listening, speaking, reading, and writing). The findings reveal how interdisciplinary projects can be implemented in language classrooms to improve learners' English skills.

1) Create a good language environment

Good language environment is to cultivate primary school students listening and speaking. The foundation of competence. Schools and families should create a rich, diverse, and positive language environment. In schools, teachers can encourage students to take an active part in class discussion, group activities and other ways to stimulate students' interest and improve their oral expression skills.

## 2) Develop listening skills

Listening is the basis of language learning, so it is very important to cultivate students' listening skills. Teachers can stimulate students' interest and improve their listening skills by using a variety of listening materials, such as English songs, cards and games. At the same time, teachers can also help students improve their listening skills by practicing listening to distinguish words and meanings, so as to better understand and use the language they hear.

It is necessary for students to listen and then speak. Listening and speaking skill, cultivate students' oral expression ability, can promote students' English development, can cultivate students' interpersonal skills, can let children become more confident, can increase children's interest, can cultivate children's curiosity. Therefore, the researcher is interested in a study how to design activities-based learning in listening and speaking for grade one Chinese students.

## 2. Research Objective

1. To design activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China
2. To compare the students' skills in listening and speaking before and after using activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China

## 3. Literature Review

### **Part 1 : The practical value of English.**

Bill, J. (2003) pointed out in "Values of English Teaching" that the relationship between teachers and students is the core of this view, rather than treating the concept of language teaching as a technical problem of managing students' language acquisition. The message is that all language teaching involves the interplay of deeply held values, but in each teaching situation these values play out in different ways.

Stimulate students' thirst for knowledge.

1. There are four skills including listening, speaking, reading, and writing, and English teaching can take place in a variety of settings, including schools, language centers, private tutoring, and online learning platforms.
2. English teaching typically involves a structured curriculum that is to design, and to develop students' language proficiency, starting with the basics and progressing to more advanced skills.
3. English teaching may also involve the use of various teaching methods and techniques.
4. The ultimate goal of English teaching is to help students become proficient in the English language.

### **Part 2 : The importance of the English environment.**

Play up the English-speaking atmosphere.

Put more listening English speaking and listening atmosphere:

Error correction: Provide feedback and correction in a constructive way, focusing on communication rather than accuracy.

Personalization: Encourage students to use English to talk about their own lives and interests, making the language more relevant and engaging.

Muhammad,K. (2010)“Facebook: An online environment for learning of English in institutions of higher education?” Network software can facilitate students' learning time and learning content. The teacher or language teacher must combine FB as an educational project with pre-determined learning goals and outcomes to make the learning experience meaningful.

**Part 3 : Arouse the enthusiasm of students .**

Slavin, RE (1983). "When does cooperative learning improve student achievement?" Students study academic material in small groups. Methodologically sufficient field experiments conducted in regular primary and secondary schools for a duration of at least two weeks show that, among cooperative learning methods in which students work together on the same material, only methods that provide group rewards based on individual group members' learning consistently improve student achievement. Group rewards and individual responsibility are considered essential for the teaching effectiveness of cooperative learning methods.

Teaching objectives:

First: skillfully use English children's songs, ballads, tongue twisters, proverbs and other training students' pronunciation, intonation.

Second: Guide students to use observation, discovery, induction, practice and other methods to learn language knowledge, feel language functions.

Third: strengthen reading and writing training while training students' listening and speaking ability.

Fourth: combined with the reality of students, appropriate explanation of grammar knowledge, do some exercises and papers, do a good job of primary school to middle school preparation.

**Part 4: Active Learning -activities and method of method of teaching.**

Joel, M. (2006)“Where's the evidence that active learning works?” Get to know. Student-centered teaching. Student-centered instruction [SCI] is a teaching method in which students influence the content, activities, materials, and pace of learning. This learning model places the student (learner) at the center of the learning process. Student-centered teaching. Student-centered instruction [SCI] is a teaching method in which students influence the content, activities, materials, and pace of learning. This learning model places the student (learner) at the center of the learning process.

1. Create an atmosphere of participation and interactive dialogue to encourage learners to have good interaction. With teachers and classmates

2. the organization of teaching activities full of vitality. Students are encouraged to participate in all activities, including. Encourage learners to succeed in their studies.

3. Provide a collaborative learning environment. Encourage collaboration among learners.

4. Challenging teaching activities and opportunities for learners to be exposed to a variety of teaching methods

5. Make a clear schedule for teaching time. Both content and activity

6. Teachers must be generous.

**Part 5: Students' achievement.**

Allan,W. (2010) pointed out in "Students' Achievement Values, goal orientation and Interest: Definition, development and relationship with achievement Outcomes" that it is very important for students to measure achievement value, goal orientation and interest, and it is a key issue for students to build learning interest and confidence. Organizing learning activities will also help learners achieve active learning.

- Think-pair-Share
- Games
- Student generated exam questions

Evaluate for students in listening and speaking Pronounce correctly and speak English boldly.

Authentic materials: Use authentic materials such as newspaper articles, videos, and podcasts to expose students to real-world English.

**3.1 Theory concept and Related Research**

Listening and Speaking Activity-Based English Teaching Skills for Students in Jinshi Primary School, Yunnan Province, China, "Using English Songs to Improve English Students' Listening Ability" This study uses games, vocabulary cards, pictures, and songs for activity-based teaching. It's the same as Eicha, A. (2021) The aim of this study was to identify the use of English songs to improve students' listening skills. The results showed that the progress of the students' listening skills during the activity was evident from the data analysis, and the researchers used tabular data. The results show that English songs are effective for listening skills. It can be seen that students are more conducive to the improvement of students' speaking and listening when they are happy and relaxed.

Utri, F. (2015) "Using Podcasts to Improve Students' Listening and Speaking Performance" The use of new technologies to enhance children's English speaking and listening learning can achieve double the effect with half the effort, and they can learn more speaking and listening in a pleasant environment.

Liane, B. (2012) mentioned in "Improving the Speaking and Listening Skills of K-2 English Learners through creative drama" that this form of interaction between students and students and between teachers and students is more conducive to improving learners' speaking and listening abilities. Direct and frequent English speaking and listening interactions with individuals who can give accurate feedback to their full potential.

**3.2 Research Framework**

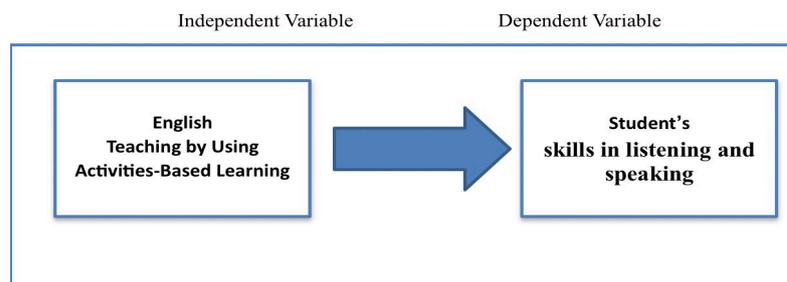


Figure 1 Research Framework

### 3.3 Research Hypotheses

The students' skills in listening and speaking before and after using activities-based learning in English teaching for Jin Shi primary school students., Yunan Province, China is better than before.

## 4. Research Methodology

This research design was using One – Group Pretest-Posttest Design to compare before and after learning with research design as follows:

### 1) Teaching – Methodology of teaching listening

Listening comprehension is the ability to understand the meaning of the words you hear and to be able to relate them in some way. When your child hears a story, listening comprehension allows them to understand, remember, talk about, and even retell it in their own words.

- 1) get their full attention.
- 2) Make reading an interactive activity.
- 3) play listening games.
- 4) play “story chain”
- 5) place an emphasis on common speech signals.
- 6) Be a good listener too.

### 2) Methodology of teaching speaking

“Effective methods of teaching speaking in primary school ”kayumova Shakhnoza.2018.The paper discusses language learning and teaching methods, the importance of oral English teaching and the improvement of oral English in primary schools Skills for some communication activities.

pupils of primary schools must be taught by effective ways of teaching speaking teacher should be:

- friendly
- give explanations and instructions clearly
- as a parent
- feel self-confidence
- intelligent.

### 4.1 Research Design

The design of this study is as follows:

testing	experiment	testing
T <sub>1</sub>	X	T <sub>2</sub>

Symbols in Research Design:

T<sub>1</sub> Pre-test before learning

X Activities-base leaching in English speaking and listening

T<sub>2</sub> Post-test after learning

$n$	refers to	Target group
$\bar{X}$	refers to	mean
$SD$	refers to	standard deviation
$t$	refers to	t-test dependent

#### 4.2 Population and Sample

Target group:20 Grade 1 students in Jin Shi primary school, Yunan Province, China.Primary school students who have been exposed to simple English should cultivate their desire to explore English. Encourage them to speak and listen carefully to English. So as to achieve the effect beyond written knowledge.

#### 4.3 Research Instrument

1) Lesson plan was evaluated by experts using 5 Likert rating scale, mean=4.61 and S.D.=0.58 It is considered a quality study program. That can be use for research.

2) Pre and Post-test was evaluated for Content Validity by experts with IOC = 0.67-1.00, (p) between 0.50-0.79, (r) between 0.29 – 0.71, and Reliability = 0.91 that was the quality test and can be used in the research.

Using teaching media to teach the word "transportation" to grade 1 students, and to study the students' skills in listening and speaking.In this study, students learn 8 English words mainly through word cards, and the teaching effect is determined through pre-test and post-test.

The test is divided into two parts. Listening section and speaking section. Score the 8 words in the listening section and take a listening test. The tests included cars, trains, planes, ships, bicycles, taxis, buses and vans. Filling in one word is 5 points, and 8 words will be tested for a total of 40 points. 8 words for the speaking section. The speaking test. The tests included cars, trains, planes, ships, bicycles, taxis, buses and vans. Filling in one word is 5 points, and 8 words will be tested for a total of 40 points. The total score is 80. The students' test is divided into pre-test and post-test.

1 student received a perfect score of 80 before the test. One student got a score of 55, but after the test, four students got a perfect score of 80, one got a score of 70, and five got a score of 60. The lowest value in the pre-test was 25 points, and the lowest value in the post-test was 40 points, with 1 person each. The results of the comparison show that the overall performance of the class has improved. The number of students with perfect scores increased from one to four. The lowest score, the difference between before and after the test is 15 points. The post-test score was higher than the pre-test score.

#### 4.4 Data Collection

Collecting data from target group 20 grade 1 students.

The researchers self-collected data using a pre-learning post-assessment method. Carrying out activities Learning as planned Learning outcome scores obtained were analyzed using statistical t-test, paired t-test to compare differences in results.

**4.5 Data Analysis**

- 1) Statistics used Mean and standard deviation (SD) in pre and post-test.
- 2) Statistics used in testing hypothesis, and to compare before and after learning by using t-test

dependent.

**Data analysis symbols were used:**

- $\bar{X}$  refers to mean
- S.D. refers to standard deviation
- t refers to t-test dependent

As the Table shows, each student has a score of IOC greater than 0.50. The average grade before activity-based learning was 40.75 with a variance of 0.0 The average grade after activity-based learning is 56.75 and the variance is =0. There has been a marked improvement. The certificate is available and all 20 students can take the exam.

**5. Research Findings**

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1	15.75000	17.34139	3.87765	7.63398	23.86602	4.062	19	.001

1) The results of using activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China, the activities-based in this research using games, vocabulary cards, pictures, and song.

2) The students' skills in listening and speaking after was higher than before using activities-based learning in English teaching with statistically significant at a level of .05 and answer the hypothesis that the students' skills in listening and speaking is higher than before.

Testing	n	$\bar{X}$	SD	t	sig
Before	20	41.50	12.26	4.062*	.001
After	20	57.25	13.99		

\* Statistical significance at a level of .05

## 6. Discussion

1) The results of using activities-based learning in English teaching for Jin Shi primary school students, Yunan Province, China, the activities-based in this research using games, vocabulary cards, pictures, and song. Study with word cards, "transport songs," and then study the student's performance. Using cards, the instructional content in the "Transport Song" because "Transportation Song" is simple and catchy, the English animation video is not only colorful but also has lovely characters, so the students have shown strong interest and willingness to learn, especially the teaching of cartoon pictures and the vocabulary of "Transportation Song" video. The students are very lively and willing to interact with teachers and classmates because it is both fun and boring. As a result, students' enthusiasm for learning English has been improved. It is the same as Syamsinar, S. (2019). Ellen, B., Fachruddin, S. ATC "promotes passion-based learning as a solution to improve creativity in the English classroom". This paper explored the idea of passion-based learning in enhancing creativity in the classroom, particularly in the English subject. By using secondary data from journals, books, and Internet sites, the researchers were able to apply descriptive analysis through literature review methods. Promoting passion-based learning may be one possible way to improve creativity in English classrooms. Passion-based learning may be a solution that gives students ownership and power to explore their creativity in the classroom so that their learning becomes meaningful.

2) The students' skills in listening and speaking after was higher than before using activities-based learning in English teaching with statistically significant at a level of .05 and according to (Ni Luh Putu, 2017), project-based learning activities and EFL students' English production skills were analyzed using paired sample t-test to determine whether there were significant differences in students' English expression ability before and after PBL teaching; At the same time, descriptive analysis of qualitative data was carried out. The results show that PBL has a significant effect on students' English production ability.

## 7. Suggestion

### 1. Suggestion for using this Research

1.1 Help students to using English activities-based learning to improve their skills in listening and speaking.

1.2 English teachers can apply English activities-based learning to another skills in reading and speaking.

### 2. Suggestion for Future Research

2.1 Do research for using team-based to promote in listening and speaking English.

2.2 Do research for using activities-based using Multi to promote in listening and speaking English.

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## **The Study of Innovation Entrepreneurship Education Policies and Their Implementation Effects in Sichuan Universities**

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### **ABSTRACT**

Promoting mass entrepreneurship and innovation constitutes a crucial pillar supporting the thorough implementation of the innovation-driven development strategy. College students serve as the primary driving force behind mass entrepreneurship and innovation. This study aimed to investigate the innovation and entrepreneurship education policies and their implementation outcomes within Sichuan universities. Specifically, the study focused on senior students and teachers from Sichuan Light and Chemical University in Sichuan Province.

Regarding the current status of innovation and entrepreneurship education at Sichuan University of Light Industry and Technology, a total of 500 questionnaires were distributed, and 489 questionnaires were collected, of which 483 were deemed valid. The questionnaire comprised 32 questions, consisting of 30 objective multiple-choice questions and 2 open-ended questions. The formal questionnaire was divided into two sections: one focused on background information, and the other on the current state of innovation and entrepreneurship education policies. Data analysis methods included frequency analysis, percentage calculations, mean calculations, standard deviation, t-tests, and ANOVA (analysis of variance).

The results of the study indicated that 67.91% of respondents believed the central government placed significant importance on innovation and entrepreneurship education, while over 70% considered that local governments did not give sufficient attention to innovation and entrepreneurship education. In terms of government planning for innovation and entrepreneurship education, only about 40% of the respondents believed that the government had comprehensive and long-term plans for innovation and entrepreneurship education. Regarding the hypotheses, it was found that factors such as gender, education level, geographic area, category, and status did not have an impact on innovation and entrepreneurship education. However, hometown area had an impact on macro leadership but did not affect resource allocation, service guarantee, and environment creation. The findings indicated a direct relationship between the implementation of innovation and entrepreneurship and

policies. Countermeasures are required to enhance the effectiveness of innovation and entrepreneurship education policies in Sichuan universities.

**Keywords:** innovation and entrepreneurship, policy, Sichuan universities, college students

## 1. INTRODUCTION

Entering the Fourteenth Five-Year Plan period, China has firmly embarked on a new phase of high-quality development. Looking ahead to 2035, China's socio-economic, political, and cultural progress will be remarkably significant. The report of the 20th CPC National Congress marks a historic moment as it integrates education, science, technology, and human resources into a cohesive strategy, recognizing them as fundamental pillars for the construction of a modernized socialist nation. Building a robust socialist modernization effort hinge on establishing a strong foundation in education. In this new era, China is actively collaborating with other nations worldwide in both economic and cultural development. The rapid expansion of international trade has led to an exponential growth in China's demand for exceptional talents in innovation and entrepreneurship. Innovation and entrepreneurship have now emerged as pivotal drivers of market economic development in this evolving landscape. In the context of the new era's market economy, it is imperative to nurture high-quality talents who possess not only a well-rounded education but also the ability to innovate and undertake entrepreneurship. These individuals need to be equipped with the resilience to thrive in the intense competition of the market and the creative thinking necessary for success. Strengthening innovation and entrepreneurship education within colleges and universities aligns with China's broader innovation-driven strategy and plays a crucial role in promoting "mass innovation and entrepreneurship" (Shengliang & Hui, 2016). In May 2015, the State Council of China issued the "Implementation Opinions on Deepening the Reform of Innovation and Entrepreneurship Education in Higher Educational Institutions." This document laid the groundwork for reforming innovation and entrepreneurship education in colleges and universities, providing a blueprint for its development. Consequently, China's institutions of higher learning have established a favorable policy framework and a supportive social environment for the enhancement of innovation and entrepreneurship education, making it a strategic goal for talent cultivation and development in higher education institutions.

The policy governing innovation and entrepreneurship education serves as the cornerstone for its implementation. As the innovation and entrepreneurship education policy systems at both national and local government levels continue to evolve and improve, innovation and entrepreneurship education within higher education institutions have experienced widespread growth and deepening, driven by these policy initiatives. In recent years, there has been a significant increase in research devoted to innovation and entrepreneurship education policy, resulting in notable academic achievements. To summarize, it appears that the majority of this academic work has predominantly concentrated on analyzing policy evolution, conducting policy comparisons, and exploring related fields, while there is a noticeable scarcity of literature examining the actual impact of policy implementation. Given the distinct regional economic, political, and cultural landscapes across China, it is imperative to adapt the implementation of innovation and entrepreneurship education policies to align with local

circumstances. Neglecting this adaptability could potentially hinder the nuanced development of higher education in Sichuan universities, thus impeding progress toward more scientifically and democratically oriented education policies.

Therefore, this thesis aimed to investigate the effectiveness of innovation and entrepreneurship education policies in Sichuan universities, analyze the experiences and challenges encountered, and provide valuable insights for enhancing the innovation and entrepreneurship education policy framework. Sichuan University of Light and Chemical Engineering has been chosen as the focus of this research for a comprehensive examination, encompassing a literature review and on-site investigations. The objective was to evaluate whether the current implementation of innovation and entrepreneurship education policies in Sichuan universities has achieved its intended objectives, identify issues in policy formulation and execution, and offer recommendations that can serve as a reference for future innovation and entrepreneurship policy implementation in Sichuan Province. The selection of this university was primarily due to its inclusion as one of the initial pilot universities for innovation and reform in Sichuan Province, making it a representative case study for assessing the current state of innovation and entrepreneurship.

## **2. RESEARCH OBJECTIVE**

(1) To investigate the impact of innovation and entrepreneurship policies and address the structural contradiction in college students' employment resulting from the expansion of college enrollment.

(2) To analyze innovation and entrepreneurship with a focus on personal information.

(3) To examine the issues and root causes that hinder the implementation effectiveness of the policy system and identify a pathway for enhancing the implementation of innovation and entrepreneurship education policies in our province.

## **3. LITERATURE REVIEW**

### **3.1 Innovation and Entrepreneurship Policy Theory**

Scholars like Bechard have emphasized that the development of innovation and entrepreneurship education policies can lead to the creation of a new teaching and learning model. Such policies advocate that the innovation and entrepreneurship education model should assist students in cultivating fresh modes of thinking through structured classroom instruction and training (Bechard & Toulouse, 1998). Stevenson and Lundström argue that the core objective of dual entrepreneurship education policy is twofold: to mitigate employment conflicts and to stimulate an increase in entrepreneurial rates. They view this policy as a means of addressing societal challenges while also fostering an environment conducive to entrepreneurial endeavors (Stevenson & Lundström, 2001). In contrast, Stevenson and Lundström contend that innovation and entrepreneurship policies have a broader scope, extending beyond the realm of education. These policies are not limited solely to creating a favorable business environment; they also encompass cultivating a culture and ecosystem that encourages innovation and entrepreneurship-related activities (Stevenson & Lundström, 2005). American scholars Jack and Colin assert that at the heart of policy-making lies an educational process aimed at enhancing overall quality. The

goal is to improve entrepreneurial capabilities, heighten entrepreneurial awareness, identify entrepreneurial opportunities, nurture new modes of thinking, and refine entrepreneurial skills (Jones & English, 2004). These scholars underscore the educational aspect of policy development in the context of entrepreneurship.

Jones and English (2004) focuses his research on entrepreneurship policy, which he defines as government policies and support measures aimed at stimulating the establishment and growth of small and medium-sized enterprises (SMEs). His work highlights the need for SMEs to receive increased attention in terms of both the content and advantages of entrepreneurship policy. Collins argues that entrepreneurship policies play a pivotal role in effectively promoting entrepreneurial activities, serving as a catalyst and facilitator for such endeavors. These policies enable individuals with a desire to engage in entrepreneurial activities to do so with the backing of government support and encouragement. Furthermore, Jones emphasizes that budding entrepreneurs, especially those in their infancy, require more opportunities for substantial development. Entrepreneurship policies are designed to provide these opportunities with the ultimate goal of enhancing the success rate of entrepreneurial activities and the survival rate of enterprises. By motivating individuals to embark on entrepreneurial ventures, these policies aim to create an environment conducive to entrepreneurial activities.

In the 1990s, scholars in China gradually started to study entrepreneurship policies and the GEM model was introduced to China. The development of entrepreneurship policy has laid a good foundation for the improvement of China's entrepreneurial environment and has received attention from all sectors of society. In the context of China's rapid economic development, the research on innovation and entrepreneurship policy has also set off a wave in the academic field. There are mainly the following aspects: first, the research on the theoretical system of entrepreneurship policy. Wang, Huang and Yin, (2009) based on the theoretical basis of the entrepreneurial process, proposed that the government should build an entrepreneurship policy system and improve related measures in five aspects, including institutional establishment, venture capital mechanism, entrepreneurship education policy, taxation policy and government procurement. Liu (2015) proposed that the Chinese government should construct the entrepreneurship policy system from four dimensions: education, financing, business and environment, while entrepreneurship education policy and entrepreneurship environment policy interact with each other and work together to stimulate entrepreneurs' entrepreneurial motivation. Second, the research on innovation and entrepreneurship policy formulation and its improvement measures. By combing the texts of academic entrepreneurship policies in universities at the national level in the past 30 years, Yi Gao Feng found that academic entrepreneurship policies in universities are gradually breaking through the bottleneck of entrepreneurship, and made suggestions in terms of strengthening the superstructure, improving the policy chain, optimizing policy tools, and enhancing support for policies (Gao Feng, 2017). Zhang and Guan based on the analysis of policies on 30 provinces and cities in China's mainland ten years ago from 2008-2018, suggested to strengthen the role of demand-based innovation policies in promoting innovation potential and innovation efficiency, and to improve the understanding of the interaction between demand-based innovation policies and other types of innovation policies (Zhang & Guan, 2020).

### 3.2 Research Framework

The presented conceptual framework primarily serves as an initial structure for organizing the key information in the questionnaire used in this study. It categorizes respondents' basic details, including gender, place of origin, professional category, hometown, and identity. Additionally, it organizes the questionnaire's inquiries into four overarching categories: macro-leadership, resource allocation, service guarantee, and environment creation.

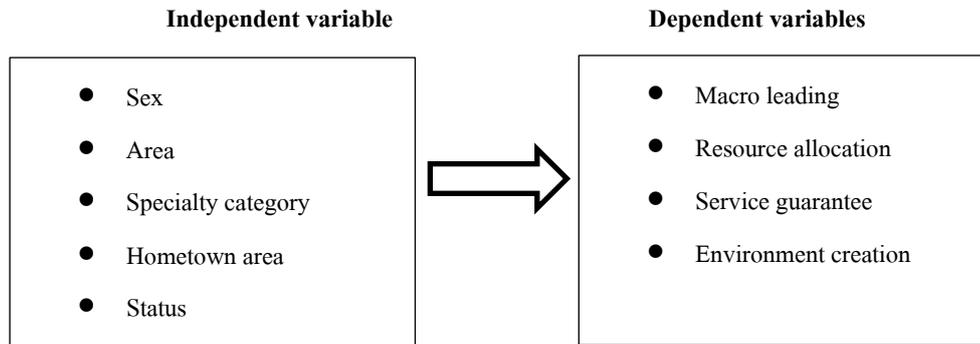


Figure 1 Research Framework

## 4. RESEARCH HYPOTHESES

1. the influence of gender on innovation and entrepreneurship education
2. the regional impact on innovation and entrepreneurship education
3. the effect of specialization categories on innovation and entrepreneurship education
4. the influence of hometown location on innovation and entrepreneurship education
5. the impact of socioeconomic status on innovation and entrepreneurship education

## 5. Research Methodology

### 5.1 Population and Sample

In this study, senior students and teachers from Sichuan Light and Chemical University in Sichuan Province were chosen as the research subjects. The senior students, who are on the brink of graduation, served as direct participants and could offer genuine and dependable information and data for the study. The teachers, acting as indirect participants, provided additional insights that complemented the study's dataset. To assess the current state of innovation and entrepreneurship education at Sichuan Light and Chemical University, a total of 500 questionnaires were distributed among the university's population. Ultimately, 489 questionnaires were collected, and after screening, 483 were deemed valid for analysis.

### 5.2 Research Instrument

The questionnaire was developed based on the components derived from entrepreneurship system theory, entrepreneurship supply and demand theory, and it took into account the current landscape of China's innovation and entrepreneurship education policies. The questionnaire design also incorporated insights from experts in the field of innovation and entrepreneurship, along with reference to previous research studies. The

questionnaire encompasses four key aspects: macro-leadership, resource allocation, security services, and environment creation. The questionnaire consists of 32 questions, comprising 30 objective multiple-choice questions and 2 open-ended questions. The formal questionnaire is divided into two sections: background information and the current status of innovation and entrepreneurship education policy.

### **5.3 Data Collection**

To gain a comprehensive understanding of the implementation effectiveness of innovation and entrepreneurship education policies, the questionnaire samples were collected using a combination of stratified sampling and random sampling techniques. The questionnaire samples were obtained using a combination of stratified sampling and random sampling procedures to gain a thorough picture of the implementation efficacy of innovation and entrepreneurship education initiatives. To ensure that the questionnaire provides an accurate, comprehensive, and objective reflection of the current state of innovation and entrepreneurship education at Sichuan Light and Chemical University, a total of 500 questionnaires were distributed. Out of these, 489 questionnaires were successfully retrieved, with 483 of them deemed valid for analysis. The recovery rate stood at 97.8%, indicating that the overall questionnaire retrieval process met the required standards.

### **5.4 Data Analysis**

This thesis employs SPSS software for the analysis of questionnaire data. The primary analytical methods used include cluster analysis or hierarchical analysis to categorize the results. The aim is to assess the implementation of innovation and entrepreneurship policies in Sichuan colleges and universities, identify areas with shortcomings, and suggest potential improvements. Through data analysis, this research aims to provide substantial evidence for addressing these issues and chart the developmental trajectory of innovation and entrepreneurship policies in Sichuan colleges and universities.

Furthermore, statistical tests such as the t-test are utilized when comparing two groups, for instance, based on variables like gender or age. On the other hand, Analysis of Variance (ANOVA) is applied when examining whether there are significant differences among the means of three or more groups, such as professional categories or hometown areas. ANOVA relies on F-tests to statistically evaluate the equality of means among these groups.

## **6. Research Findings**

The basic situation of college students at Sichuan Light and Chemical University can help us better grasp the environment of the implementation of innovation and entrepreneurship policies among college students and can provide relevant guidance and references for the implementation of more accurate and targeted innovation and entrepreneurship policies.

The survey conducted involved collecting a total of 483 questionnaires, with 218 male students (45.13%) and 265 female students (54.87%). The distribution of male and female participants in the survey was relatively balanced. Regarding the distribution of academic disciplines, Sichuan University of Light and Chemical Technology, being a science and technology-focused institution, had a significant representation of students from

science and technology programs, constituting 46.17% of the sample size. The fields of economic management and arts accounted for 21.12% and 19.05%, respectively, while education made up 13.19%. In terms of students' places of origin, 66.04% came from urban areas, while 33.96% hailed from rural areas. As for the regional distribution of hometowns, the majority of students originated from southwest China (28.36%), followed by central China (18.22%).

Based on the data collected, it was found that gender, location, field of study, hometown area, and status do not have a significant impact on innovation and entrepreneurship education. However, when looking at the averages, female respondents had higher innovation and entrepreneurship education than male respondents. Additionally, those living in urban areas and studying education or arts had higher innovation and entrepreneurship education. Those from Northwest China had higher innovation and entrepreneurship education than those from East or Central China. Finally, teachers had higher innovation and entrepreneurship education than students.

Table 1 Summary hypothesis analysis

Variable	Sex	Area	Specialty category	Hometown area	Status
Macro leading	T-test =.047 Sig =.871	T-test =.019 Sig =.551	F-test =.755 Sig =.555	F-test= 3.140* Sig =.005*	T-test =.036 Sig =.340
Resource allocation	T-test =.249 Sig =.243	T-test =.264 Sig =.309	F-test =.414 Sig =.799	F-test = 2.472 Sig =.023*	T-test= .614 Sig =.897
Service Guarantee	T-test =.987 Sig =.070	T-test= .925 Sig =.355	F-test= .350 Sig =.844	F-test= .376 Sig =.894	T-test =.849 Sig =.155
Environment creation	T-test =.299 Sig =.628	T-test =.308 Sig =.774	F-test =1.143 Sig =.335	F-test= .888 Sig =.504	T-test= .968 Sig =.890
Total	T-test =.749 Sig =.094	T-test =.764 Sig =.153	F-test =1.139 Sig =.337	F-test= 1.073 Sig =.378	T-test =.334 Sig =.237

\*significant level at 0.05

## 7. Discussion

The results of this study demonstrated that the central government had attached great importance to innovation and entrepreneurship education in the macro-led aspect. However, the local government appeared to have faced challenges in effectively implementing relevant innovation and entrepreneurship education policies, and less than half of the respondents thought that the government had a comprehensive and long-term plan for innovation education. In terms of resource allocation, most respondents reported that their universities had established dedicated departments or organizations for innovation and entrepreneurship education. Despite this, over half of the interviewees believed that these educational entities had not fully harnessed their potential to create a conducive learning environment for innovation and entrepreneurship among students.

In the context of publicity and awareness, many respondents acknowledged that their universities had effectively used various media channels to promote innovation and entrepreneurship. Nevertheless, concerns were raised about the universities' recognition of innovation and entrepreneurship achievements and their incentive mechanisms, both of which were seen as potential barriers to the development of innovation and entrepreneurship among college students. These findings emphasize the need for clearer policy direction, more efficient implementation, and enhanced support mechanisms to nurture a culture of innovation and entrepreneurship in China's higher education institutions.

The implementation of innovative entrepreneurship policies in Sichuan universities reveals a lack of policy coordination and linkage. China's policies for fostering innovation and entrepreneurship among college students are established at both the national and local levels. The state provides an overarching plan and guidelines, while local governments tailor policies to suit their specific contexts (Dan, Ying, Donglin, 2020). Given the multifaceted nature of college students' innovation and entrepreneurship, numerous government departments are involved in policy formulation, each focusing on its own responsibilities. Consequently, this fragmented approach can lead to overlapping authority and duplicated policy content in college students' entrepreneurship policies. From a macroscopic perspective, both national-level macro policies and local-level detailed policies lack systematization and cohesion, with each policy existing independently and disconnected from others. This fragmentation can create confusion among college students and hinder their understanding of the policies, ultimately impeding the effective promotion of these policies in society. Presently, national-level entrepreneurial service policies establish broad principles, outline general directions, and propose providing entrepreneurial support for college students at the macro level. However, they do not provide clear provisions for specific implementation details. Local governments have independently introduced detailed regulations for implementation. However, challenges persist in the implementation process, whether at the central or local level. The reality of innovation and entrepreneurship is highly diverse, and detailed provisions may not encompass all specific scenarios. Despite the decreasing barriers to entrepreneurship, numerous restrictions continue to impact college students.

## **8. Conclusion**

The majority of interviewees (over 70%) feel that local governments are not giving enough attention to innovation and entrepreneurship education, indicating a lack of implementation and avoidance of relevant policies. While 80.33% of interviewees reported that their schools have established departments or institutions dedicated to innovation and entrepreneurship education, others were unaware of such departments. Over a third of respondents (35.82%) reported incomplete experimental teaching facilities for innovation and entrepreneurship in their schools. Over half of respondents reported a lack of opportunities for college students to participate in innovation and entrepreneurship competitions, with low frequency and scale of such competitions organized by their schools. Additionally, around 70% of respondents had not participated in relevant activities such as inviting successful entrepreneurs and organizing entrepreneurship forums or lectures. More than half of respondents felt that the university's recognition and incentive mechanisms for innovation and entrepreneurship achievements were not sufficient, which may hinder the development of innovation and entrepreneurship among college students.

## 9. Suggestion

(1) Optimization suggestions in macro-leading: Improve the supply of policies for different stages of entrepreneurship development. The government should provide top-level design and theoretical guidance tailored to the new era, considering the general law of social and economic development. (Zhou.,2020,)

(2) Optimization suggestions in resource allocation: Foster "dual-teacher" faculty to enhance expertise. The government should guide and strengthen financial support for college students, encouraging the establishment of diverse financing channels to promote innovation and entrepreneurship. (Li.,2021)

(3) Optimization Suggestions on Service Guarantee: Enrich practical activities on campus to enhance innovation and entrepreneurship education (Lin,Ping.,2019)

(4) Collaboration with innovation and entrepreneurship bases is crucial for practical implementation. Implement tracking assessment, feedback, and supervision mechanisms to ensure effective policy implementation. (Zhifang, Ming, Yuliang.,2017)

(5) Optimization Suggestions on Environment Creation: Establish a publicity mechanism for innovation and entrepreneurship policies targeted at college students. Emphasize the importance of innovation and entrepreneurship in promoting economic development and enhancing international competitiveness through relevant policies and regulations. (Yao.,2018)

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# **The Relationship Between Instructors' Work-life Balance and Occupational Stress with Employee Engagement at an International University in Bangkok, Thailand**

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## **ABSTRACT**

Maintaining a good work-life balance and minimizing occupational stress is important for university faculty as it can affect the quality of teaching. These factors are also closely tied to employee engagement, as engaged faculty are enthusiastic about teaching which is a core responsibility. This study aimed to determine whether there was a significant relationship between instructors' work-life balance and occupational stress with their employee engagement at an international university in Bangkok, Thailand. Thirty-seven instructors from one university participated in this correlational study. The findings from this study reveal the instructors in this sample were reasonably satisfied with their work-life balance and did not overly feel stressed in their work and had positive perceptions of engagement with their work. The correlational findings indicated that these concepts, while correlated with each other, if taken together, may not significantly influence employee engagement.

**Keywords:** University Instructor, Work-Life Balance, Occupational Stress, Employee Engagement

## **1. Introduction**

Work-life balance, occupational stress, and employee engagement are closely interlinked and can impact an employee's performance and well-being. Work-life balance refers to balancing the demands and responsibilities of personal life, including family, social, and leisure activities. Thai university lecturers face various pressures that can impact their work-life balance, occupational stress, and, consequently, their employee engagement. Occupational stress that arises from work related pressures can contribute to an imbalance of work-life balance. Some of these pressures include increased workload, funding challenges for research, changing student demographics, and rising expectations for English proficiency and research requirements. These increased pressures are brought about due to increasing competition among universities and concerns about faculty effectiveness and capability (Tepayakul & Rinthaisong, 2018). Occupational stressors for university instructors are not a new phenomenon in Thailand. According to Atthakorn (2013), many university lecturers are expected to develop themselves and improve their capabilities while at the same time may not be supported effectively by their universities in terms of time and incentives. According to Mohan and Suppareakchaisakul (2014), the work

demands of Thai faculty require that they adjust to changing policies and educational strategies and keep up with technological advances, which can affect their work-life balance. Studies related to work-life balance have found that it has a direct effect on job satisfaction and that job satisfaction has a direct effect on work engagement (Harini, et al., 2020).

The recent pandemic has also exacerbated the work-life balance as the challenges of transitioning to online teaching, increased workload, and the blurred boundaries of remote teaching and working from home contributed to the disruption (Kirby et al, 2023). Thus, studying work-life balance, occupational stress and employee engagement of university instructors is important not only for the well-being of instructors themselves, but also for the overall success and reputation of the institutions they work in which can lead to improving the quality of education.

## **2. Research Objectives**

1. To determine the level of work- life balance of instructors at an international university in Bangkok, Thailand.
2. To determine the level of occupational stress of instructors at an international university in Bangkok, Thailand.
3. To determine the level of employee engagement of instructors at an international university in Bangkok, Thailand.
4. To determine whether there is a significant relationship between work-life balance and occupational stress with employee engagement of instructors at an international university in Bangkok, Thailand.

## **3. Literature Review**

### **3.1 Theories**

#### **Conflict Theory (Greenhaus & Beutell, 1985)**

Greenhaus and Beutell (1985) stated that if one part of life was achieved, another part might be deficient. Work and life are two parts that cannot be fulfilled simultaneously because of different rules and regulations. Human beings need time and energy to perform their various roles. The theory states that three situations comprise the theory: *work interference with personal life* (work invades a person's personal life and energy), *personal life interference with work* (the opposite situation that people pay more attention to their lives and families, which influence their work); and *work/personal life enhancement* (a win-win situation where both work and life get the better feedback).

#### **Psychological Stress and Coping Theory (Lazarus & Folkman, 1984)**

According to this theory there are three components of occupational stress: *curricular and extra-curricular activity stress*, *classroom management stress*, and *working conditions stress*. *Curricular and extra-curricular activity stress* focuses on the teaching aspects, including the stress from teaching experience and after-university experience of instructors. *Classroom management stress* focuses on the management and the

relationship between instructors and students. The last component is *working conditions*, which is stress from colleagues and the work environment.

### Work Engagement Theory (Kahn, 1990)

Work Engagement Theory refers to how people show their preference in their work to strengthen the relationship between jobs and themselves. A high level of work engagement can improve employees' performance according to the investment of psychology and body by themselves. It has three components: *intellectual*, *social*, and *affective engagement*. Intellectual engagement emphasizes contributing more to the aspect of exploration and problem-solving. It is the kind of brainstorming which using in work problems solving. Social engagement shows the skills and abilities of society. From that, it is obvious how people participate in collective activities and get along with others in different situations. Affective engagement reflects how people think of their work, colleagues, and company. It must show the satisfaction of their jobs directly, which has a high reference value.

### 3.2 Research Framework

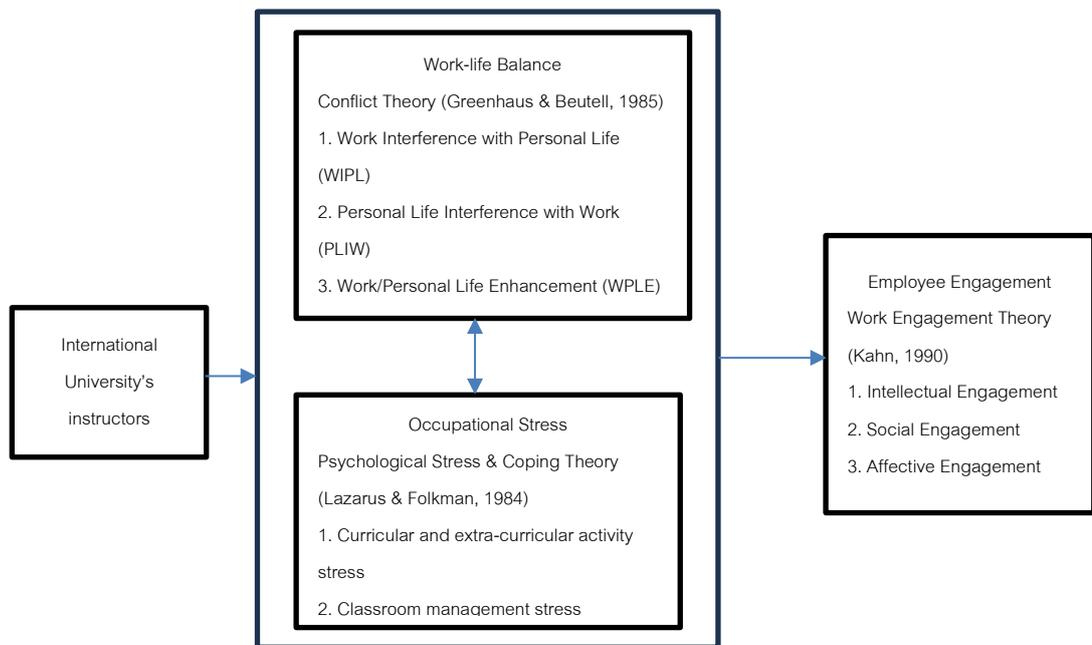


Figure 1 Research Framework

### 3.2 Research Hypotheses

1. There is a significant relationship between work- life balance and occupational stress at a significance level of .05.
2. There is a significant relationship between work- life balance and employee engagement at a significance level of .05.
3. There is a significant relationship between occupational stress and employee engagement at a significance level of .05.

4. There is a significant relationship between work-life balance and occupational stress with employee engagement of instructors at a significance level of .05.

## 4. Research Methodology

### 4.1 Research Design

The research utilized a quantitative correlational design using a survey methodology. The questionnaire comprised 44 items to measure the three variables: work-life balance, occupational stress, and employee engagement.

### 4.2 Population and Sample

The population of this study was comprised of the selected university's undergraduate instructors. The total population of undergraduate instructors was 304 instructors from nine undergraduate faculties. One hundred seventy surveys were emailed to the target population of instructors. Thirty-seven surveys were returned, which was a response rate of 22 percent.

### 4.3 Research Instruments

The proposed study combined three previously developed instruments: The Work-life Balance Scale (Hayman, 2005), the Instructors' Occupational Stress Questionnaire (Hendres et al., 2014), and the ISA Engagement Scale (Soane, 2012).

### 4.4 Data Analysis

For the first, second and third research objectives, descriptive statistics (Mean and standard deviations) were used to determine the level of work-life balance, occupational stress, and employee engagement of instructors at an international university in Bangkok, Thailand. To determine whether there is a significant relationship between work-life balance and occupational stress with employee engagement of instructors at an international university in Bangkok, Thailand, correlational analysis (multiple correlation coefficient) was used.

## 5. Research Findings

According to the data, there were 37 respondents, and 54.1% were female respondents, including 20 instructors. Male respondents accounted for 45.9% which were 17 instructors. The first research objective was to measure instructors' work-life balance levels. Table 1 shows the summary of the findings for this variable.

Table 1. Summary of the Overall Means and Standard Deviation of Instructors' Perceptions Towards Work-life Balance (n=37)

Variable	Mean	SD	Interpretation
Work Interferes with Personal Life	2.50	1.186	Low
Personal Life Interferes with Work	2.28	1.030	Low
Work/Personal Life Enhancement	3.31	1.103	Moderate
<b>Overall</b>	<b>2.70</b>	<b>1.106</b>	<b>Moderate</b>

The second research objective was identifying instructors' occupational stress levels at an international university in Bangkok, Thailand. The researcher used the Instructors' Occupational Stress Questionnaire developed by Hendres et al. (2014). Table 2 show the summary findings.

Table 2. Summary of the overall Means and Standard Deviation of Instructors' Perceptions towards Occupational Stress (n=37)

Variable	Mean	SD	Interpretation
Curricular and Extra-curricular Activity Stress	2.56	1.443	Moderately low
Classroom management stress	2.58	1.429	Moderately low
Working Conditions Stress	3.23	1.562	Moderately low
<b>Overall</b>	<b>2.79</b>	<b>1.478</b>	<b>Moderately low</b>

The third research objective was to identify instructors' level of employee engagement at an international university in Bangkok, Thailand. The researcher used ISA Engagement Questionnaire developed by Soane et al. (2012). Table 3 shows the summary findings.

Table 3. Summary of the overall Mean and Standard Deviation of Instructors' Perceptions towards Employee Engagement (n=37)

Variable	Mean	SD	Interpretation
Intellectual Engagement	5.84	1.305	Moderately high
Social Engagement	5.12	1.444	Slightly high
Affective Engagement	5.49	1.540	Slightly high
<b>Overall</b>	<b>5.48</b>	<b>1.430</b>	<b>Slightly high</b>

Research objective four of this study was to determine the relationship between work-life balance and occupational stress with employee engagement of instructors at an international university in Bangkok, Thailand. The bivariate correlations between instructors' work-life balance and occupational stress (independent variables of this study) and instructors' employee engagement (dependent variable) at an international university. Table 4 shows the results of the correlational analysis.

Table 4. Bivariate Correlations between Work-life Balance and Occupational Stress with Employee Engagement of Instructors at an International University in Bangkok, Thailand. (n=37)

Variables	1	2	3
1. Work-life Balance	-	-	-
2. Occupational Stress	.484**	-	-
	.002		
3. Employee Engagement	.034	-.258	-
	.841	.123	

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

The bivariate correlations between independent variables were significantly and moderately correlated with their occupational stress ( $r = .484, p < .01$ ). Moreover, the instructors' work-life balance was found to have weak correlation with their employee engagement ( $r = .034, p > .01$ ). Instructors' occupational stress was found to have weak correlation with their employee engagement ( $r = .258, p > .01$ ). There was no significant correlation between the combined independent variables of work-life balance and occupational stress and dependent variable of employee engagement. Therefore, the final research hypothesis was not supported.

## 6. Discussion

Overall, the instructors in this sample rated their work-life balance at a moderate level. This indicates that they were neither satisfied nor dissatisfied with their present conditions. According to Kalliah and Brough (2008), many personal conceptualizations may affect the respondents' answers such as the multiple roles an individual has, the perceived equity across those roles, the interpretation of fulfillment across the roles, the relationship between conflict and facilitation, and the perceived control that the individual has. Similarly, different aspects of work and personal life, such as partner support, childcare responsibilities, elder dependency, and colleague support, were not rated, which may be possible determinants, especially in this context (Fatima & Sahibzada, 2012). A final reason for the moderate outcome may be that the instructors at this university were not particularly satisfied or dissatisfied with their current work-life balance situation when they took this survey. The instructors may be able to manage their work commitments without feeling overly strained, or they can cope with both demands well (Kossek & Lautsh, 2017).

The respondents' perceived levels of Occupational Stress in this study were Slightly Low. "Slightly low" could be interpreted as in the mid-range and show that they were not overly stressed. *Positive work environment*-studies have shown that when employees are happy with their work environments, their levels of occupational stress are low (Oginyi et al., 2018). The perceptions of these instructors may reflect that they are happy with the university's work environment and that the organization pays attention to creating a positive working environment for the instructors. *Appropriate workload*-according to a study of academics by Lee et al. (2022), one of the common themes that were found to relate to occupational stress was academic workload.

Academic pressure to produce research and balance the demands of teaching were found to contribute to occupational stress. The demands of meeting research requirements affected instructors' personal lives, negatively impacting work-life balance, and creating conflict. The low levels of occupational stress found in this study may indicate that the respondents felt that their workload was satisfactory or that they may not experience too much direct pressure to produce research. *Control and Autonomy*-university academics have traditionally had a high level of control and autonomy with their work. However, according to Winefield et al (2001), this has changed since the 1990s in universities. This has been due to the pressure to publish, the reduction of tenure, and job security. That the results of this study seem to be the opposite of the research may highlight a difference in the administrative policies of the university. *Effective Coping Strategies*-according to Anbazhagan and Rajan (2013), stress is a common element in current organizations. Nevertheless, individual coping mechanisms and organizational support can effectively reduce organizational stress. The lower levels of organizational stress found in this study may indicate that the respondents have effective ways of dealing with stress or that the university provides ways for its instructors to reduce stress.

The overall level of Employee Engagement was found to be at a "Slightly high" level. These findings align with the other findings that show the instructors are satisfied with their work-life balance, have low levels of occupational stress, and are overall engaged in their work. Medium tending to high levels of employee engagement typically shows a moderate level of connection, involvement, and commitment to work. There seems to be a reasonable interest in work, and the instructors are moderately satisfied with their jobs. This can indicate that the organizational culture, leadership style, job roles, and individual preferences are satisfactory in this sample. On the other hand, the seemingly mid-range levels of all three variables measured independently can also reflect response bias. Survey respondents may alter their true feelings because they are concerned about judgment, negative consequences, or desire to present themselves positively. This bias can happen when individuals want to avoid negative judgment or conform to social norms. According to Van de Mortel (2008), respondents tend to make socially desirable responses when they want to present a good image of themselves, or they may fear that their responses are not anonymous. As the researcher delivered the surveys via personal email of the instructors at the university, the survey results may be biased and not reflect the respondent's true feelings. No correlations were found between the two independent variables of Work-life Balance and Occupational Stress with Employee Engagement. This may also be due to the small sample size. In small samples, the correlation coefficients may not accurately reflect the true strength and direction of the relationships between the variables, and confirmation of hypothesis or hypothesis testing ability can be lowered due to insufficient data.

## **7. Recommendations**

### **7.1 Recommendations for Administrators at the University**

Sustaining and Improving work-life balance for university instructors is related to creating an environment that supports well-being. Providing instructors with options for flexible work schedules, working from home, and other options can help instructors manage their work commitments and meet their personal needs.

Communicating clear and realistic expectations related to workload, teaching responsibilities, research, and administrative tasks are also ways to improve the work-life balance. This can also lead to more supportive university policies, thereby boosting instructor morale. Reducing occupational stress involves implementing strategies that address the challenges they face as instructors. This may be related to workload management, flexible work arrangements as outlined previously, and providing professional development related to teaching effectively and managing time or stress reduction techniques. Improving instructors' employee engagement involves creating a positive and supportive environment that will motivate and foster their passion for teaching, research, and professional growth.

### 7.2 Recommendations for Future Researchers

The researcher acknowledges the limitations of the study due to the small sample size and possible respondent bias. For future studies, it is recommended that other sampling methods such as targeted sampling be used to ensure a variety of participants and ways to distribute the questionnaire that will assure participants of the anonymity and confidentiality of their responses to encourage open and honest answers. Additionally, future researchers may want to include multiple methods or a triangulation of methods such as interviews, open-ended questions and surveys or multiple methods of data collection.

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## **A Conceptual Framework for The Development of Measurement Instruments for Studying Factors Implicit in The Accomplishment of Algebraic Learning**

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### **ABSTRACT**

The objectives of this article are to present the conceptual framework of factors effected to algebraic learning achievement and algebraic learning achievement. This study integrated concepts, theories, and research on learning models, model of factors influencing academic achievement, mathematical representation, engagement to learning and student faith in teacher of various educators. In the study it was found that achievement emotions measured from 2 indicators: boredom in learning and enjoyment in learning. Engagement to learning measured from 3 indicators: power to learning, dedication to learning, and a sense of unify with learning. Student faith in teacher measured from 3 indicators: faith in benevolence, faith in competence, and faith in Integrity. Achievement motivation measured from 3 indicators: commitment, satisfaction to learning activities, and awareness level of self-learning ability. Categorization skill measured from 1 indicators: problem matching ability score. Mathematical representation measured from 3 indicators: visual representational forms, symbolic representational forms, and verbal representational forms. Algebraic learning achievement measured from 1 indicators: algebraic learning achievement test scores according to the core learning indicators of the mathematics learning subject group (revised version 2017), according to the basic education core curriculum B.E. 2551 (A.D. 2008).

**Keywords:** Conceptual Framework, Factor Influencing, Algebraic Learning Achievement

## 1. Introduction

Algebra is a branch of mathematics related to structures, relation, and quantities. An algebraic statement or equation is a model for interpreting and drawing conclusions from information to make decisions. In addition, symbols and algebraic reasoning are fundamental to the design of computer systems. Mathematical reasoning is developed through algebra, and an understanding of algebra (Egodawatte, 2011, pp. 1-2). If a student has a good background knowledge of algebra, it will make them a reasonable person, have a good idea, and able to make good decisions to solve problems. Such as, Allen (2015, pp. 1-4) studied and found Algebra 1, Geometry, and Algebra 2 learning achievements influenced mathematics scores in measuring the learning skills required for university study. In addition, Egodawatte (2011, pp. 130 -167) studied and found students lack understanding of basic concepts of variables in different contexts. The abstract structure of algebra poses many problems for students, such as understanding and dealing with principles, processes, or algorithms. Lack of understanding of the use of the equality property. Students have problems translating natural language into algebraic language. and students use guesswork or wrong methods to solve problems.

Developing students to have knowledge and understanding of algebra is therefore an important goal. So that students will have basic knowledge for learning mathematics at higher levels. Developing students' knowledge of algebra should focus on students demonstrating and analyzing algebra using words, tables, and graphs (Lambertus, 2007, p. 1). In addition, teachers should be aware of the variables or factors that directly and indirectly influence algebraic learning achievement. Over the past several decades, factors influencing to academic achievement and the relationship between, them have been identified and investigated. Variables affecting the success of learning activities and learning achievement, them have been studied by educators as follows: Taasoobshirazi & Carr (2009, pp. 630-643); Bailey, Carr, & Taasoobshirazi (2014, pp. 440-461) studied and found achievement emotions, achievement motivation, Pictorial representation, and categorization skill or problem solving skill affects learning achievement. Gunuc (2014, pp. 216-231) and Dogra, and Dutt (2016, pp. 33 – 35) studied and found Engagement to learning has a positive relationship with learning achievement. Bankole (2010, pp. 1-82); Romero (2010, pp. 1-127); Casper (2012, pp. 1-80); Kennedy (2014, pp. 1-92); Prickett (2016, pp. 1-127); and Moses (2018, pp. 1-186) studied and found student faith in teacher affects learning achievement. Wiley and Harnischfeger (1976 as cited in Schreiber, 2000, pp.14-15) studied the learning model and found the learning model is divided into three parts: (1) Background consists of curriculum, teaching, basic characteristics of teachers and students. (2) Teaching-Learning Process consists of organizing teacher learning activities, and the pursuit of knowledge by students. And (3) Acquisition consists of student achievement.

From the learning model, model of factors influencing to learning achievement, research on the engagement to learning and student faith in teacher in the aforementioned, the researcher interested in studying dimensional factors related to the learning process. Especially the problem-solving process because it is a dimension that can be controlled by teacher and student.

## **2. Objective**

To present a conceptual framework for creating the measuring instruments to study factors influencing achievement in algebraic learning achievement.

## **3. Factors effected to algebraic learning achievement**

From the integration of learning models, model of factors Influencing to learning achievement, research on the engagement to learning, and student faith in teacher. Resulting in three causal variables, namely, the input aspect, which is the characteristics of the learners, consisting of achievement emotions, engagement to learning, student faith in teacher, and achievement motivation. Process consisting of Categorization skill and mathematical representation. Output were algebraic learning achievement. The results of the study of relevant academic articles and research, the author has found the conceptual framework of variables and indicators of variables as follows.

### **3.1 Achievement emotions**

From the study of academic articles and research of Pekrun, Goetz, Daniels, Stupnisky, and Perry (2010, p. 531-549); LePera (2011, p. 15-25); Bailey, Carr, and Taasobshirazi (2014, p. 440-461); and Schukajlow (2015, p. 137-144) can be summarized as a conceptual framework for create a measure of achievement emotions factors as follows:

Achievement emotions mean the emotion that is directly related to the success of an activity, or achieving results, consisting of positive emotions is enjoyment and boredom. Therefore, achievement emotions is measured from 2 indicators:

1) Boredom in learning mean an expression of feeling uncomfortable, discouraged, worried, uncomfortable, and not enjoying learning activities.

2) Enjoyment in learning mean an expression of feeling like, comfortable, having fun with learning activities, feel challenged, want to learn and concentrate on activities.

### **3.2 Engagement to learning**

From the study of academic articles and research of Gunuc (2014, p. 216-231); Dogra, and Dutt (2016, pp. 33-35); and Office of the Education Council, Ministry of Education (2016, p. 1-83) can be summarized as a conceptual framework for create a measure of Engagement to learning factors as follows:

Engagement to learning mean Students' perceptions of the power to learn, effort or dedication in completing an activity or doing something, and have a sense of unity with that learning or work. Engagement to learning is measured from 3 indicators as follows:

1) Power to learning mean the feeling that one has the energy or ability to complete learning activities or tasks. While studying feeling energetic.

2) Dedication to learning mean making or spending most of your time learning both inside and outside of the classroom. Dedicated to activities or tasks that have been assigned well.

3) A sense of unify with learning mean the feeling of students who think they are unify with the learning subject or learning activity. By knowing and understanding the aims of the learning subject and the arrangement of learning activities. Participate in learning activities both inside and outside the classroom.

### **3.3 Student faith in teacher**

From the study of academic articles and research of Bankole (2010, p. 1-82); Nwandiko (2017, p. 1-133); Prickett (2016, p. 1-127); and Casper (2012, p. 1-80) can be summarized as a conceptual framework for create a measure of Student faith in teacher factors as follows:

Student faith in teacher mean the trust of the students in the teacher rationally. Without compulsion and have the intention to act according to the words, actions, and decisions of the teacher, to achieve learning achievement. Student faith in teacher is measured from 3 indicators as follows:

1) Faith in benevolence mean a student's trust in a teacher because the teacher attend to the student. Recognizing the efforts of students and is a good adviser.

2) Faith in competence mean a student's trust in a teacher because the teacher make activities interesting, challenging, fun, and informative.

3) Faith in Integrity mean a student's trust in a teacher because the teacher is fair, honest, friendly and openness.

### **3.4 Achievement motivation**

From the study of academic articles and research of Awan, Noureen, and Naz (2011, p. 72-79); Abuameerh and Saudi (2012, p. 313-320); Akpan and Umobong (2013, p. 385-390); Bailey, Carr, & Taasobshirazi (2014, pp. 440-461); Pan and Guha (2015, p. 1-9); and Khan and Alam (2015, p. 62-71) can be summarized as a conceptual framework for create a measure of achievement motivation factors as follows:

Achievement motivation mean the feeling of wanting or desire to try to learn. To achieve understanding, expect to do better, see the benefits or importance of learning. It is something that encourages students to actively participate in learning activities. In order to achieve the highest goal or cause success or achievement of work. Achievement motivation is measured from 3 indicators:

1) Commitment means having the confidence to use a good learning strategy. Committed to completing difficult or challenging activities and always eliminate their own problems or weaknesses.

2) Satisfaction to learning activities means a good feeling or attitude towards the subject matter and learning activities, see the benefits and importance of the learned subject, satisfied to learning success or participating in learning activities.

3) Awareness level of self-learning ability means confidence or belief in one's own abilities. Be confident that oneself can do well on the test, have a good learning outcome, and are concerned with learning failures or poor learning outcomes.

### **3.5 Categorization skill**

From the study of academic articles and research of Cabonero and Dolendo (2013, pp. 1–38); Bailey, Carr, and Taasobshirazi (2014, p. 440-461); Danovitch and Noles (2014, p. 2098) can be summarized as a conceptual framework for create a measure of Categorization skill factors as follows:

Categorization skill mean the ability to present, hierarchy, classify problems, and group problems or things that have the same properties or characteristics according to specified criteria into one group. To make it easy to understand, choose the right and effective presentation method and problem solving, Categorization skill is measured from 1 indicators: problem matching ability score. Using questions or strategies for solving problems as criteria.

### **3.6 Mathematical representation**

From the study of academic articles and research of The National Council of Teachers of Mathematics (NCTM) (2000, pp. 67-71); NCTM (2014, p. 24-29); Fashihah & Qohar (2020, p. 115-124); Ya-Amphan (2022, pp. 423-436); and The Institute for the Promotion of Teaching Science and Technology (2020, pp. 22-28) can be summarized as a conceptual framework for create a measure of mathematical representation as follows:

Mathematical representation means communicating concepts expressed through the use of pictures, number lines or diagrams, symbols and writing. to reflect an understanding of the problem and finding the answer of problem, consisting of 5 indicators that are related as follows: Contextual representational forms, Visual representational forms, Verbal representational forms, Physical representational forms, and Symbolic representational forms. In this study, was interested in studying the model of using mathematical representations from three elements: visual representational forms, symbolic representational forms, and verbal representational forms, to illustrate the relationship of a problem. This leads to choosing a solution or finding a more suitable solution. have a better understanding of the problem. Therefore, Mathematical representation is measured from 3 indicators: Visual representational forms, Symbolic representational forms, and Verbal representational forms.

## **4. Algebraic learning achievement**

A student's ability to learn algebra was measured by the student's algebraic learning achievement. The author has studied academic articles and research of Supadit (2013, p. 7); Phiphitkul and Thipkong. (2010, p. 75); and Office of the Basic Education Commission, Ministry of Education (2017, pp. 7-38) can be summarized as a conceptual framework for create a measure of mathematical representation as follows:

Algebraic Achievement mean knowledge and understanding of algebraic learning about sets, symbolic logic, polynomial, and the ability to apply knowledge to solve problems. By considering the scores on the algebraic achievement test, measured according to the core learning indicators of the mathematics learning subject group (revised version 2017), according to the basic education core curriculum A.D. 2008.

## 5. Conclusion

Variables and indicators of variables in tools to study factors influencing algebraic learning achievement. Can be summarized as follows:

1. The input factors, which was student characteristics, consisting of:

1.1 The Achievement emotions was measured from 2 indicators: boredom in learning and enjoyment in learning.

1.2 the engagement to learning was measured from 3 indicators: power to learning, dedication to learning and a sense of unify with learning.

1.3 The Student faith in teacher was measured from 3 indicators: faith in benevolence, faith in competence and faith in Integrity.

1.4 The achievement motivation was measured from 3 indicators: commitment, satisfaction to learning activities and awareness level of self-learning ability.

2. The process factors, consisting of :

2.1 The categorization skill was measured from 1 indicators: problem matching ability score by using questions or strategies for solving problems as criteria.

2.2 The mathematical representation was measured from 3 indicators: visual representational forms, symbolic representational forms, and verbal representational forms. Because of the use of pictures, diagrams, graphs, tables, symbols, or models to show relationships in problems. They will make choosing a solution or finding the right answer, understanding of the problem and able to write and explain ideas for solving problem.

## 6. Suggestion

This conceptual framework for creating the measuring instrument to study factors influencing learning achievement in algebra will be useful to academics, researchers, educators, and teachers involved. which can bring the conceptual framework to create measuring instruments, and can expand the results of the research study further.

Teachers can apply the conceptual framework of the developed variables to create tools for measuring and evaluating learners in terms of desirable characteristics, attitude towards learning, ability to solve problems, and algebraic learning achievement.

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# **The Study of Smart Citizens Character: Guideline for Developing for Students's Rajamangala University of Technology**

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## **ABSTRACT**

This research aims to study the characteristics of smart cities and propose guidelines for student development at the Rajamangala University of Technology. The tool used for this research is a survey questionnaire, and content analysis is employed. It is found that smart citizens should possess knowledge and the ability to apply technology for economic and livelihood benefits. They should create an environment that fosters creativity and out-of-system learning, as well as promote social diversity and the development of students to have smart city characteristics. Rajamangala University of Technology is an educational institution that focuses on science and technology, emphasizing graduates as pillars of sustainable societal and national development. Therefore, the university should design and develop supplementary curriculum activities to cultivate smart city characteristics in students, nurturing graduates with the potential to be highly skilled and quality global citizens.

**Keywords:** Character, Smart Citizens

## **1. Introduction**

The United Nations estimates that by 2050, the Earth's population will increase by 2 billion, forming a large city. In the next 15 years, the population of large cities will increase. According to current average statistics, residents of large cities account for about 55%, while residents of large cities account for about 45%. Living outside the city. In the next 30 years, the proportion of people living in big cities is expected to rise to 68%. For Thailand, the living rate of big cities is about 50% at present (Siemens research), and the world situation is changing rapidly. No matter in climate, there are various deadly epidemics, such as 19 Covedy's disease. Among them, all these factors will affect the development of all aspects, whether it is the development of big cities or different aspects, in order to prepare for the upcoming situation, such as basic services, public utility management, environmental and housing situation management, various social services, public health services, and even education services, if major changes are considered. Thanachart Numnont (2022) summarized five main changes: 1) technological changes, and 2) demographic changes. 3) Changes in economic superpowers, 4) changes in urban society, and 5) climate change. Due to technological changes and advances, including the expansion of the commercial and industrial sectors, as well as changes in the global situation. As a result, the development of

urbanization and digitization continues to evolve into new dimensions and innovations. "Smart City" is a way to manage the new situation.

Starting from the changing situation, Thailand has formulated a 20-year national strategic framework (paragraph 5). From 2018 to 1980, while attaching great importance to improving the quality of life of Thai people, all Thai people must live on the basis of happiness, well-being, reducing social inequality and being able to expand to the region in an all-round way. Taking King IX's self-sufficiency economic philosophy as the prototype, they will point out the direction for Thailand's development and build a stable, prosperous and sustainable development. Therefore, they have formulated a smart and livable city development plan to make every city in Thailand livable. To understand the definition of "smart city" and the key mechanism driving urban space, the key is human resources or manpower, Pahfun Chittmitrapap, Ruedej Kerdwichai, Pornkul Suksod and Duangkamon Chantararatmanee (2022). This paper studies the driving factors for the success of smart city development in Bucharest province, and finds that there are three factors involved in the development of smart city in Bucharest province: government, private sector and citizens, among which citizens are the most driving factors for the success of smart city development in Bucharest province.

Higher education institutions are institutions of higher learning. It is an important organization that develops people into good, quality citizens. able to meet the needs of society and the nation and must be more than just a place to educate But it must be a place that serves to nurture youth to grow up with quality. Both academic matters, skills, attitudes and understanding of coexistence within society. Serves to develop manpower both at the academic and professional levels in various fields that are necessary for the development of the country. Rajamangala University of Technology The management's policy that will lead the university to become a Smart University by developing management in all aspects. Including the importance of being a smart citizen of students. And from changes in technology and innovation affecting the work structure of the workforce that uses digital technology as a factor in production Therefore, Rajamangala University of Technology It is necessary to prepare and develop students to become graduates with desirable characteristics. The student organization, student council, and student union are important mechanisms for students to link activities in line with the main mission of the university in the form of student-run activities. for students This will result in students being able to apply it in real practice.

Situation of the above changes Therefore, the researcher is interested in studying the characteristics of smart citizens. of graduate students Rajamangala University of Technology Phra Nakhon To use the study results as a guideline for developing student potential of Rajamangala University of Technology. and go out into society as quality citizens

## **2. This research aimed**

1. To study the smart citizens of characteristics.
2. To propose guidelines for developing graduate students. Rajamangala University of Technology

### **3. Literature Review**

In this research, the researcher studied documents, concepts, theories, and related research in order to seek knowledge that could be used. Used to define the framework of research concepts. Therefore, the relevant documents and research have been compiled in the following key areas:

#### **3.1 Smart city concept**

The development of a smart city has seven key development dimensions as follows: 1) Smart Environment 2) Smart Mobility 3) Smart Living 4) Smart People 5) Smart Energy) 6) Smart Economy 7) Smart Governance (Smart City Development Committee,2019)

1. Smart Environment is a city that focuses on improving quality and increasing efficiency. management effectiveness and monitoring systematic environment and environment, such as water management, climate care Disaster surveillance as well as increasing public participation in natural resource conservation.

2. Smart Mobility is a city that focuses on increasing convenience, efficiency and safety in travel and transportation. And friendly to the environment

3. Smart Living It is a city that focuses on providing services that facilitate life, such as health services for people to have good health and well-being. Especially to prepare for the aging society Increasing public safety through crime surveillance to the promotion of facilities for proper living

4. Smart Citizens is a city that focuses on developing citizens to have knowledge and be able to apply technology to benefit both the economy and life. Create an environment that fosters creativity and informal learning. Including promoting coexistence with social diversity.

5. Smart Energy is a city that focuses on increasing the energy efficiency of the city. Or use alternative energy as clean energy (Renewable Energy) such as biomass fuel. electricity from renewable energy And electricity from other energy sources, etc.

6. Smart Economy is a city that focuses on increasing efficiency and flexibility in business operations. Create business links and cooperation and applying innovations in development to transform businesses (such as smart agricultural cities Smart Tourism City, etc.

7. Smart Governance is a city that focuses on developing service systems to provide citizens access to government services conveniently and quickly, increasing public participation channels. Including allowing the public to access information, resulting in transparency and verifiability.

Smart city development It is a policy that the government promotes and gives importance to. by giving a national agenda that must be taken urgently Emphasize the utilization of modern technology and innovation. Increase the efficiency of city services and administration.

#### **3.2 Theories that encourage learners to have intelligent citizenship characteristics**

In this section, researchers propose basic theoretical concepts that support students' development and becoming gifted citizens.

#### Tree moral theory

This is the first psychological theory of Thai students, created by Professor Duangduen Pantumnawin (2000). The theory proposes a key framework: Basic characteristics and psychological factors, which will lead to the ideal behavior of encouraging a person to become a good person and a good person. The moral tree theory of the Thai people is divided into the following three parts: The first part is about the flowers and fruits on the tree. Demonstrate the behavior of doing good, not doing bad, and working hard for the public. These are behaviors of good citizens that are conducive to national development. Tree trunks represent industrious professional behavior, including five psychological characteristics: 1) moral reasons 2) Focusing on the future and self control 3) Believing in power 4) Motivation for achievement 5) Attitudes, ethics, and values 3) Rooting This represents diligent professional behavior, including three psychological characteristics: 1) intelligence, 2) social experience, and 3) mental health.

#### Participation Theory

In situations that change rapidly. Participation is no matter what level, such as the family level. at the school, community, organization, or national level Considered to be of great importance in the current situation paradigm for Keith Davis (1972) mentioned that participation is related to both psychological and emotional. As a result of that connection cause the operation to achieve the goals of the group as well as creating a sense of responsibility for the group as well.

#### Eric Erickson's Theory of Social Development

Erik Erikson (1902) describes the development of social skills as related to the development of personality. A person develops personality throughout their lifetime. Importantly, it can promote an impact on social interaction, or good or bad relationships with others in society. Ericsson divides personal development into the following 8 stages: 1) Infancy (birth–12 months) 2) Early childhood (12 months–3 years): Autonomy vs. Shame and doubt 3) Late childhood (3–5 years): Initiative vs. Guilt 4) School age (5–13 years): Industry vs. Inferiority 5) Adolescence (13–20 years): Identity vs. Role confusion 6) Young adulthood (20–30 years): Intimacy vs. Isolation 7) Adulthood (40–60 years): Generativity vs. Stagnation 8) Old age (60 years–deaths): Ego integrity vs. Despair

#### Piaget's Theory Intellectual Development)

Jean Piaget (1896-1980) Study the cognitive development process of children. This theory is based on intellectual and environmental development. Piaget explained that every child's learning is based on intellectual development, and Piaget found that Everyone's intellectual and ideological development is achieved through interaction. And adapt to the environment.

#### Knowledge connection theory

The knowledge connection theory (Siemens, 2005; Downes, 2012) is a relatively new learning theory in the digital world. Encourage students to creatively brainstorm ideas, theories, and general information. Technology is an important component of the learning process and connectivity. The theory of knowledge linkages aims to enable individuals, organizations, and technologies to jointly create knowledge.

#### 4. Research methods

This study is a qualitative research study conducted through documentary research. It involves gathering information by examining documents and studying relevant literature on the concepts of smart city development, urban development, various documents related to student development, and related research studies.

##### 4.1 Research scope

4.1.1 Content scope Learn about the core components of a smart city and their connection to smart citizen development issues.

4.1.2 Area Boundary Rajamangala University of Technology

4.1.3 Time scope Study and collect data between March 1 and March 30, 2023.

##### 4.2 Research tools and data collection

The research tool used in this study is a data recording form, which is a checklist for verifying the variables related to various aspects of smart city characteristics, including: applying technology to your advantage, creative ability, lifelong learning, coexistence with social diversity, participation and cooperation in various matters, expressing opinions, enthusiasm, flexibility, self-control, and commentary.

##### 4.3 Data Analysis

After completing the collection of data The researcher analyzed the data according to the qualitative data analysis method, in which the data obtained from the study were organized and separated into individual issues. and use content analysis

#### 5. Study results

##### 5.1 Key components of smart cities and their connection to urban development issues

From the study of research papers on the components of smart city (smart city) in various aspects, which Suriyanon Pholsim (2018) presented in the article on definitions, components, indicators and results of being a smart city. As the details appear in Table 1.

Table 1 Key components of smart cities and their connection to urban development issues

Component	Connection with the city
Smart Economy	Commercial and industrial sectors
<b>Smart People</b>	<b>Education</b>
Smart Governance	E-democracy
Smart Mobility	Infrastructure and logistics
Smart Environment	Efficiency and sustainability
Smart Living	Stability, safety, and quality

Table 1 shows seven aspects of smart city development: 1) Smart environment 2) Smart mobile 3) Smart life 4) Smart people 5) Smart energy 6) Smart economy 7) Smart governance is related to organizations that perform various responsibilities, such as business. And the industrial sector, education, e-democracy, infrastructure and logistics, efficiency and sustainability, and stability, Safety and quality. Smart people are related to education.

*Smart Citizens Character*

A study of relevant documents and research found that The key feature of Smart Citizens, which is an important mechanism for driving and developing a city. must have the following important characteristics: appropriate application of technology Participate and collaborate in various activities. Have an open world with enthusiasm and flexibility. coexist with diversity and creative minds ready for lifelong learning able to create innovations to develop the city able to control himself and express opinions appropriately

By defining the elements and characteristics of intelligent citizens and the development of future citizens, researchers have integrated the characteristics of intelligent citizens. As shown in Table 2.

Table 2 Synthesis of Smart Citizen Characteristics

concept	Smart City	Smart	Bangkok	Sopita Chaiyakam	Suriyano	Giffinger	Helen Dian	Total
Characteristics	Development Steering Committee (2562)	City Thailand Office (2560)	Smart City (2562)	And Supawatanakorn Wongthanavasu (2562)	n Pholsim (2561)	et al. (2007)	Fridayani and Achmad Nurmandi (2018)	
Applying technology to your advantage	✓	✓	✓	✓	✓	✓	✓	7
creative ability	✓	✓	✓	✓	✓	✓	✓	7
Life Long Learning	✓	✓	✓	✓	✓	✓	✓	7
Coexistence with Social Diversity	✓	✓	✓	✓	✓	✓	✓	7
Participation and cooperation in various matters and expressing opinions				✓	✓	✓	✓	4
Enthusiastic				✓	✓	✓	✓	4
Flexible				✓	✓	✓	✓	4
Self-control and comment				✓	✓	✓	✓	4

Table 2, It can be concluded that smart citizens should have 4 key characteristics: the application of technology to benefit; be creative Have informal or lifelong learning There is a coexistence with social diversity.

### **5.2 Guidelines for developing graduate students. Rajamangala University of Technology**

Rajamangala University of Technology It is a university specialized in science and technology. Aims to produce graduates who are qualified practitioners with morality and professional ethics. Creation of research and inventions to be reliant on the society in terms of academic services, conservation, preservation of religion, arts, culture, and environmental preservation for the development of the country. Sustainable and managed according to good governance principles Aiming at developing graduates to think systematically practice excellence have a university identity and is dependent on society

Guidelines for enhancing the characteristics of smart citizens For students of Rajamangala University of Technology

1. Develop a series of activities for students at Phranakhon Rajamangala Polytechnic University to enhance smart citizenship.
2. Encourage learners to have intelligent citizenship and use technology appropriately through digital skills.
3. Promote lifelong learning to respond to sudden changes and global crises
4. Promoting Multicultural Coexistence and Learning
5. Develop guidelines to promote student participation at Rajamangara Polytechnic University.

Achieving learning and coexistence

The application of theory to promote the characteristics of smart citizens.

Theories that can be applied to activities to promote students' intellectual citizenship characteristics, such as moral tree theory. Duangduen Pantumnawin (2000), This is the psychological foundation of human beings. If they want to cultivate talents, they want to demonstrate their behavior. A good person, a person with social qualities, must begin by developing spiritual characteristics on the trunk and roots of the tree. Lay the foundation for an appropriate psychological foundation and prepare for further development in various fields, both in terms of moral rationality. Self-control, moral and value attitudes, or the expression of diligent work through intellectual or social experience. Including mental health, participation theory Keith Davis (1972) talks about participation, which involves both psychological and emotional connections. Due to the interrelated results, the Group's goals have been achieved and a sense of responsibility towards the Group has emerged. Eric Erickson (1902) based on Freud's psychoanalytic theory. This is the development of human beings from the beginning to their expected lifespan. Ericsson regards human development as a whole. Each person's personality is different and develops at all stages of life. This theory helps individuals understand themselves and develop themselves according to the needs of living with others. It is similar to Jean Piaget (1896-1980) and focuses on development and intelligence. Children's intellectual development is a complex and delicate process, but it can be understood. Children's intellectual processes are formed by adapting to their environment in two ways: absorbing experience. And adjusting the intellectual structure according to the environment to balance children's thinking and

understanding. Will be able to absorb the experience he has gained and then combine it to achieve a thinking process. There is a connection between old stories and new ones. This has led to changes in the thinking and understanding of children, including (Siemens, 2005; Downes, 2012) helps students use technology correctly without harming others. These theories will be the basis for designing activities that enhance the characteristics of intelligent citizens; and The knowledge connection theory is a learning theory for the digital world, which helps to connect knowledge to the modern world without borders. Bring your potential to full play together.

## **6. Conclusion**

From the results of the study, the characteristics of intelligent citizens for students at Rajamangala University of Technology include having knowledge and being able to apply technology to benefit both the economy and life. Create an environment that promotes creativity and informal learning. Including promoting coexistence through social diversity. Rajamangala University of Technology It is a university specialized in science and technology. Aims to produce graduates who are qualified and virtuous practitioners to be dependable on the society and for sustainable development of the country. This line with the Smart Citizen concept of the Digital Economy Promotion Agency (2022) that must have 4 important characteristics: application of technology to benefit be creative There is informal or lifelong learning. Living together with social diversity Universities should design and develop extra-curricular activities to enhance the characteristics of intelligent citizens in students. To produce graduates with potential To be intelligent citizens and quality global citizens.

Furthermore, Rajamangala University of Technology should develop students to possess key characteristics for becoming smart citizens. Technology support is a crucial component of smart city characteristics. Students should be able to use technology to solve problems and adapt rapidly to changing situations. Promoting creativity and out-of-system learning is essential in developing smart city characteristics. Encouraging social diversity and fostering student collaboration are vital for creating smart cities. The role of the university is pivotal in this regard. Rajamangala University of Technology should remain committed to being an educational institution that focuses on science and technology and aims to produce graduates with the ability to contribute to the development of society and the nation.

## **7. Suggestions**

### **7.1 Suggestions for applying the research results**

The general education should organize extra-curricular activities to provide a basis for students to think, analyze, synthesize, and be able to apply in accordance with changing situations.

### **7.2 Suggestions for further research**

Development of extra-curricular activities for fostering intelligent citizens

## 8. acknowledgment

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**Developing Strategic Guidelines for Working Performance Evaluation of  
Teachers in Vocational Schools: A Case Study of Guangdong Vocational College,  
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**ABSTRACT**

The objectives of this research were: 1) To investigate the opinions of Vocational school teachers and administrators towards problems of the evaluation of working performance of the Vocational school teachers, 2) To investigate needs of strategic guidelines for the evaluation of working performance of the Vocational school teachers, and 3) To construct strategic guidelines for the evaluation of working performance of the Vocational school teachers. Guangdong Vocational College in China was used as a case study. The population and samples were divided into 2 group; namely, 300 Vocational school teachers and 60 school administrators. Moreover, 3 specialists were used for the focus group discussion meetings to collect ideas, suggestions and comments for the construction of the strategic guidelines. The research instrument for this study included: 1) questionnaire for the investigation of problems and needs, and 2) a set of questions for the 3 focus group discussion meetings. The questionnaire was evaluated for its validity through the Index of Congruence (IOC) and possessed the value in the range of 0.66 to 1.00. In addition, the questionnaire was also evaluated for its reliability through Alpha Cronbach Coefficient and possessed the value of 0.82. The data and information from the investigation of needs and problems were collected by the researcher himself using the questionnaire online via emailing. The collected information and data were then analyzed, interpreted and presented in terms of frequency counts, mean, and standard deviations. Moreover, The Likert rating scale was used to rate the degree or level of problems and needs.

The findings from this research indicated that Vocational school teachers and administrators rated both the problems of the evaluation of working performance of the Vocational school teachers and needs of strategic guidelines for the evaluation of working performance of the Vocational school teachers at the "Highest" level. In addition, the constructed strategic guidelines for the evaluation of working performance of the Vocational school teachers composed of 5 units; namely, 1) Guidelines for daily behavior of Vocational school teachers; 2) Leave and attendance systems for Vocational school teachers; 3) Penalties for disciplinary violations for Vocational school teachers; 4) The performance of Vocational school teachers should follow the principles of "efficiency first, stability, and fairness"; 5) Performance evaluation of Vocational school teachers. The contents of the strategic guidelines were evaluated and approved through content analysis method by the three specialists and then represented in terms of IOC (Index of congruence) and possessed the IOC value ranging from 0.66 to 1.00. It can be assumed that this strategic guideline is suitable as part of the evaluation of working performance of the Vocational school teachers at Guangdong Vocational College in China.

**Keywords:** Strategic Guidelines, Working Performance, Vocational Schools

## 1. Background

The General Office of the Central Committee of the Communist Party of China The General Office of the State Council issued the "Opinions on Deepening the Reform of Modern Vocational Education System Construction", which states: Adhering to serving the comprehensive development of students and economic and social development, based on improving the key capabilities of vocational schools, focusing on deepening the integration of industry and education, promoting the integration of vocational education as the key, and taking the integration of science and education as the new direction, we fully mobilize the enthusiasm of all aspects, coordinate the collaborative innovation of vocational education, vocational education, and continuing education, orderly and effectively promote the construction and reform of the modern vocational education system, and effectively improve the quality, adaptability, and Attraction, cultivating more high-quality technical and skilled talents, skilled craftsmen, and great country craftsmen, laying a solid foundation for accelerating the construction of an education, technology, and talent power. It can be seen that vocational schools play an important role in China's economic and cultural construction. In order to ensure that the expansion of student scale does not affect the quality of education, vocational schools attract social forces to participate in school investment, raise funds to build new campuses, accelerate the improvement of educational conditions, and achieve high-quality development of vocational education through loans, financial subsidies, land replacement, and other means. At the same time, there are also issues such as a lack of understanding of financial risks in vocational schools, the continuous expansion of debt scale in vocational schools, and even some vocational schools face significant debt risks. With the continuous increase in the scale and operating costs of vocational schools, many vocational schools are now facing the problem of tight funding. From the joint release document of the Ministry of Education and the Shandong Provincial Department of Education on jointly building vocational education highlands, researchers

can see that this situation is common. In response, Luo Xiaoqiu, Vice Dean of Chongqing Urban Management Vocational College, discussed the human cost management of vocational education teaching reform. Vocational colleges must fully implement the scientific development concept, effectively focus on improving quality, and increase teaching investment and strengthen teaching management. We must establish cost awareness and strengthen the concept of efficiency. The core of controlling and reducing educational costs lies in how to make more effective use of limited resources. Chinese vocational schools should strive to establish an effective internal resource allocation system. As the backbone of vocational school work, decision-making in teaching, scientific research, and subject construction should first establish cost awareness. In the management of vocational schools, researchers must adhere to the bottom line of costs, adhere to the principles of "doing according to one's abilities, living within one's means, being diligent and frugal, opening up resources and reducing expenses, doing something, and not doing something", and implement stable and tight fiscal policies. In the current financial situation, universities must be more cautious than before. As a core tool for resource and personnel allocation in vocational schools, it is also necessary to establish cost awareness and efficiency concepts. In the context of increasingly tight funding for vocational school education, the salary income of vocational school employees, especially teachers, has been "thriving" step by step. At the beginning of the reform and opening up, the average salary level of teachers has been hovering in the third to last position among the 12 industries in the national economy. Since the reform and opening up, the Party and the state have gradually attached importance to education investment and carried out several systematic reforms on the salary system of vocational schools. The overall effect is that teachers' salary income is increasing. In the past 20 years, the average annual salary of vocational school teachers has increased by 17.8 times. The average annual salary of vocational school teachers has exceeded 23300 yuan, an increase of 2261 yuan compared to 2002 and nearly 22100 yuan compared to 1985. At present, vocational school teaching has become one of the most attractive majors. According to the regulations of the State Administration of Taxation, China is currently in a high income state (Zhao Yuanke, 2020). Content Analysis of Vocational Education Policy Texts in my country from the Perspective of Policy Instruments—Based on my country's Vocational Education Administrative Regulations since 2002. Vocational Education Communication, Zhu Zhipeng, Zhang Jiawei, Yang Haihua. (2021). Therefore, the researcher has been constantly seeking strategic guidelines for evaluating the job performance of vocational school teachers.

## **2. Objectives**

- 1) To investigate the opinions of Vocational school teachers and administrators towards problems of the evaluation of working performance of the Vocational school teachers
- 2) To investigate needs of strategic guidelines for the evaluation of working performance of the Vocational school teachers
- 3) To construct strategic guidelines for the evaluation of working performance of the Vocational school teachers

### 3. Review of Literature

#### 3.1 Concepts/Theories/Related Research

Taylor, D. (2015). *Performance*. Duke University Press. The meaning of performance. Performance has two dimensions, organizational performance and individual employee performance. For performance at the individual employee level, there are two main views. One sees performance as an outcome, and outcome performance can be expressed by words such as output, target, task, goal, etc. The other sees performance as an individual behavior. Bernardin, drawing on the results of previous studies, defines performance as the record of output produced by a specific job function or activity at a specific time. Taken together, individual employee performance should be a combination of process and outcome ratings. For the organization, performance is the completion of work tasks in terms of quantity, quality and efficiency. The level of employee performance directly affects the completion of the organization's overall goals. Therefore, understanding the characteristics of performance and the factors affecting performance is of great significance to improve employee performance.

Zhao, J., & Burke, A. F. (2021). Review on super capacitors: Technologies and performance evaluation. *Journal of working performance*, 59, 276-291. Performance evaluation refers to the use of certain evaluation methods, quantitative indicators and evaluation criteria to conduct a comprehensive evaluation of the implementation results of a certain performance target. At present, performance evaluation is a general trend of international vocational education evaluation, and the importance and urgency of enriching the evaluation system of Chinese Vocational school teachers are increasingly prominent. In the new historical period, the performance evaluation of Vocational school teachers is of great practical significance to continuously improve the internal management, improve the efficiency of running schools and the efficiency of the use of public funds. In order to encourage Vocational school teachers to make effective use of educational resources and improve the quality of teaching, the Outline of the National Medium- and Long-term Education Reform and Development Plan 2010-2020 requires Vocational school teachers to introduce competition mechanism, implement performance evaluation and carry out dynamic management. The report to the 19th National Congress of the CPC proposed establishing a comprehensive, standardized and transparent budget system with scientific standards and strong constraints, and implemented performance-based management across the board. At present, the connotation of performance evaluation in Vocational school teachers is constantly enriched, the methods are increasingly diversified, and the functions are constantly expanded, and the distinctive evaluation ideas or systems are gradually formed.

### 3.2 Conceptual Framework

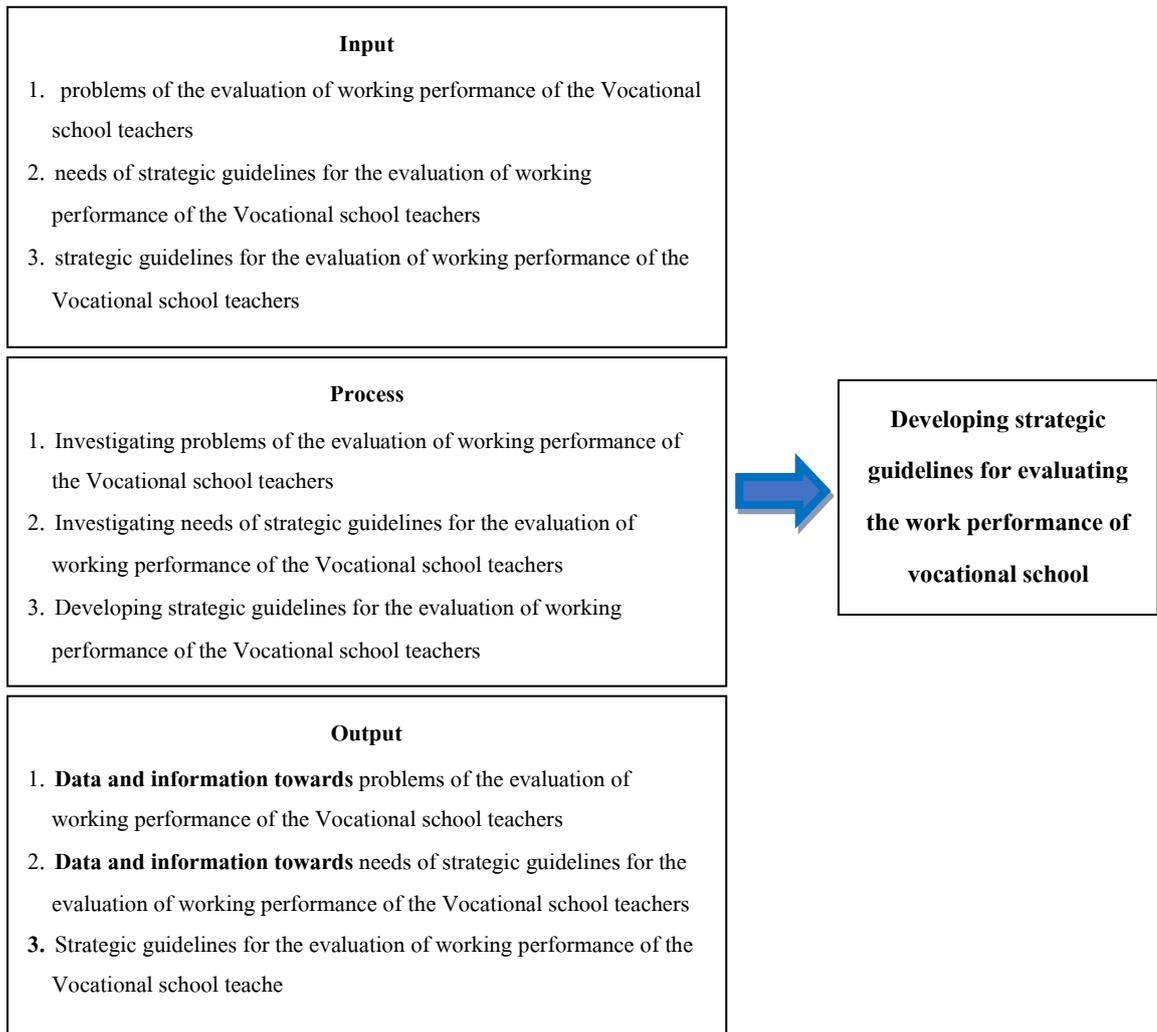


Figure 1: Conceptual Framework work

## 4. Research methodology

### 4.1 Population/Sample Groups

**Population:** In this research project, Guangdong Vocational College was used as a case study. The population and samples were divided into 2 groups; namely, 600 Vocational school teachers and 100 administrators. For the improvement and correctness of the constructed strategic guidelines, the samples were the 3 specialists who are 2 English native speakers and 1 Thai professor.

**Sample group:** In this study, the sample groups were divided into two groups: 1) A sample group was obtained using stratified random sampling technique from 600 vocational school teachers and 100 administrative personnel as the research subjects.

### **Samples Groups:**

#### **4.2 Research Instrument**

The main research instrument were: 1) questionnaires, and 2) a set of questions for the three focus groups discussion meetings. The questionnaire for collecting data and information concerning problems of working performance of the Vocational school teachers in universities, and needs of strategic guidelines for the evaluation of working performance of the Vocational school teachers were constructed based on theories and concepts of constructing questionnaires. The questionnaire was evaluated and approved in terms of correctness and suitability by the 3 specialists (2 English native speakers and 1 Thai professors. The IOC values of all questions in the question were in the range of 0.66-1.0 indicating that the questionnaire was acceptable for the usage of collecting data and information in this research. Moreover, the set of questions were used for the collection of ideas and comments from the three focus group discussion meetings. The ideas and comments from the three specialists were used to improve and correct the strategic guidelines.

#### **4.3 Data Collection**

For the collection of data and information towards needs and problems, the researcher herself collected data and information from the 700 respondents online via emailing. For the 3 focus group discussion meeting, the online meetings via Zoom Link was employed to collect ideas and comments from the 3 specialists. The ideas and comments were then used for improving and correcting the constructed strategic guidelines.

#### **4.4 Data Analysis**

For the data and information towards the needs and problems collected from the sample groups were analyzed, interpreted and presented in terms of frequency count, percentage, mean and standard deviation. The Five Point Likert Rating Scale was used to evaluate the respondents' opinions. Moreover, the comments and ideas from the 3 focus group discussion meetings were analyzed through content analysis, then used for the evaluation and approval of the strategic guidelines for the evaluation of working performance of the Vocational school teachers in Guangdong Vocational College in terms of the correctness and suitability via IOC(index of Congruence).

## **5. Research Results**

**5.1 Based on the data and information requirements of the Strategic Guidelines** for Performance Evaluation of Vocational School Teachers, as well as the strategies and guidelines for performance evaluation of vocational school teachers, strategic guidelines for evaluating the work performance of vocational school teachers are formulated.

**Part 1: Problems of the evaluation of working performance of the academic officials**

Questions	N=360		Level of problems
	$\bar{X}$	S.D.	
1. You think that the current criteria of working performance are not reasonable	4.51	0.28	Highest
2. You consider the criteria of getting promotion are not fair	4.53	0.29	Highest
3. You think that individual working development is not effective	4.50	0.29	Highest
4. You think that there is less spiritual inspiration at work.	4.54	0.29	Highest
5. You think that there is little working stability.	4.51	0.31	Highest
6. You are not satisfied with your current work .	4.51	0.27	Highest
7. You are not satisfied with your current working environment/atmosphere.	4.51	0.28	Highest
8. You are not satisfied with the stability of your job	4.59	0.29	Highest
9. You are not satisfied with your current salary.	4.59	0.27	Highest
10. You are not satisfied with the placement of college wages according to work	4.51	0.29	Highest
11. You are not satisfied with the range and speed of the college salary increase	4.53	0.29	Highest
12. You are not satisfied with the actual results of the College's assessment	4.53	0.29	Highest
13. Your are not satisfied with the accuracy of the College's existing assessments	4.58	0.30	Highest
14. You are not satisfied with the comprehensiveness of the College's existing assessments	4.51	0.29	Highest
15. You are not satisfied with the improvement of your professional ability	4.59	0.29	Highest
<b>Total</b>	<b>4.51</b>	<b>0.29</b>	<b>Highest</b>

According to this table, it is indicated that most of academic officials and administrators rated problems of the evaluation of working performance of the academic officials in universities at the Highest level of average score ( $\bar{X}=4.51$ ) (S.D.=0.29). Moreover, all 15 questions were rated in the Highest level.

**5.2 Needs of the evaluation of working performance of the academic officials**

Questions	N=60		Level of problems
	$\bar{X}$	S.D.	
Needs			
1. There is a need for reasonable criteria of working performance evaluation	4.56	0.28	Highest
2. The problems of getting promotion need to be solved.	4.53	0.32	Highest
3. Individual development needs to be considered	4.52	0.39	Highest
4. Spiritual inspiration needs to be created	4.60	0.32	Highest
5. Working stability needs to be improved	4.60	0.33	Highest
6. you current work needs to be improved	4.53	0.30	Highest
7. your current working environment needs to be improved	4.61	0.31	Highest
8. You need stability of your job	4.54	0.29	Highest
9. You need to get higher salary	4.55	0.30	Highest
10. You need the improvement the placement of college wages according to work	4.54	0.31	Highest
11. You need the improvement of the range and speed of the college salary increase	4.57	0.26	Highest
12. The actual results of the College's assessment need to be improved	4.55	0.30	Highest
13. the accuracy of the College's existing assessments needs to be improved	4.52	0.28	Highest
14. the comprehensiveness of the College's existing assessments needs to be revised	4.54	0.25	Highest
15. You need the improvement of your professional ability	4.55	0.27	Highest
<b>Total</b>	<b>4.53</b>	<b>0.28</b>	<b>Highest</b>

1) Needs of the evaluation of working performance of the academic officials

According to this table, it is indicated that academic officials and administrators rated needs of the strategic guidelines for the evaluation of working performance of the academic officials in universities at the Highest level of average score ( $\bar{X}$ 4.53 ) (S.D.=0.28).

Moreover, it is also indicated that all of the 15 questions were rated at the Highest level.

**Part 2: Problems of the evaluation of working performance of the academic officials**

Questions	N=360		Level of problems
	$\bar{X}$	S.D.	
1. You think that the current criteria of working performance are not reasonable	4.51	0.28	Highest
2. You consider the criteria of getting promotion are not fair	4.53	0.29	Highest
3. You think that individual working development is not effective	4.50	0.29	Highest
4. You think that there is less spiritual inspiration at work.	4.54	0.29	Highest
5. You think that there is little working stability.	4.51	0.31	Highest
6. You are not satisfied with your current work .	4.51	0.27	Highest
7. You are not satisfied with your current working environment/atmosphere.	4.51	0.28	Highest
8. You are not satisfied with the stability of your job	4.59	0.29	Highest
9. You are not satisfied with your current salary.	4.59	0.27	Highest
10. You are not satisfied with the placement of college wages according to work	4.51	0.29	Highest
11. You are not satisfied with the range and speed of the college salary increase	4.53	0.29	Highest
12. You are not satisfied with the actual results of the College's assessment	4.53	0.29	Highest
13. Your are not satisfied with the accuracy of the College's existing assessments	4.58	0.30	Highest
14. You are not satisfied with the comprehensiveness of the College's existing assessments	4.51	0.29	Highest
15. You are not satisfied with the improvement of your professional ability	4.59	0.29	Highest
<b>Total</b>	<b>4.51</b>	<b>0.29</b>	<b>Highest</b>

According to this table, it is indicated that most of academic officials and administrators rated problems of the evaluation of working performance of the academic officials in universities at the Highest level of average score( $\bar{X}=4.51$ ) (S.D.=0.29). Moreover, all 15 questions were rated in the Highest level.

2) Needs of the evaluation of working performance of the academic officials 学术官员工作绩效评价的需要

Questions	N=60		Level of problems
	$\bar{X}$	S.D.	
Needs			
1. There is a need for reasonable criteria of working performance evaluation	4.56	0.28	Highest
2. The problems of getting promotion need to be solved.	4.53	0.32	Highest
3. Individual development needs to be considered	4.52	0.39	Highest
4. Spiritual inspiration needs to be created	4.60	0.32	Highest
5. Working stability needs to be improved	4.60	0.32	Highest
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14. the comprehensiveness of the College's existing assessments needs to be revised	4.51	0.25	Highest
15. You need the improvement of your professional ability	4.55	0.27	Highest
<b>Total</b>	<b>4.51</b>	<b>0.29</b>	<b>Highest</b>

According to this table, it is indicated that academic officials and administrators rated needs of the strategic guidelines for the evaluation of working performance of the academic officials in universities at the Highest level of average score ( $\bar{X}=4.51$ ) (S.D.=0.28).

Moreover, it is also indicated that all of the 15 questions were rated at the Highest level.

## **6. Discussion of the Research Results**

Based on the results of this study, it can be concluded that there are issues with the performance evaluation of academic officials and the need for strategic guidelines for the performance evaluation of academic officials. The satisfaction of managers with job performance evaluation is determined by the evaluation of employees' work environment, work ability, personal work attitude, and salary level. The strategic guidelines consist of five units, all of which have been evaluated with an IOC value of 0.66 to 1.00, which means that the developed IOC value can serve as a guide to improving work efficiency, and 1.00 is acceptable as part of building a disciplinary oversight strategy guide. The Likert five component scale is also used to test the correlation between performance satisfaction and education (education) and gender. The results show that the older the age, the higher the satisfaction; However, the correlation between salary satisfaction and gender, education level, and salary satisfaction is not significant or significant. How to maintain the "healthy, stable, and healthy" development of universities in fierce competition, based on the principle of "efficiency first, stability, and fairness" in the investigation results of university employee performance? The first basic measure is to rely on performance to attract high-quality talents and motivate employees to work efficiently. The determining factors of teacher performance are position and qualifications. In addition, the performance and contribution of teachers, as well as the nature of their profession and school, can also affect the level of teacher performance. In recent years, performance reforms in foreign universities have tended to increase incentives and implement strict performance evaluations and tenure systems; Secondly, there is a new "egalitarianism" between the content of the same job level and the same amount of allowances and bonuses for employees with the same technical title, which cannot reflect their work performance; Thirdly, there is a new egalitarianism between the introduction of talents by universities and the existing talents. Firstly, the talent performance system introduced by universities is disconnected from the existing employee performance system.

## **7. Recommendations for Further Study**

1) It is necessary to evaluate and study the effectiveness of the "Strategic Guidelines for Evaluating the Work Performance of Vocational School Teachers" among vocational school teachers.

2) It is necessary to study the factors that affect the job performance evaluation ability of vocational school teachers.

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The next one should be the three specialists to evaluate the competence and correctness of the questionnaire and handbook. And I also need to say many thanks to President Dr. Yuwalak Vejwitayaklung accept me as a student at Dhonburi Rajabhat University

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## **Constructing a Strategic Handbook for English Speaking Enhancement of Primary School Students: a Case Study of Huajiadi Experimental Primary School**

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### **ABSTRACT**

The objectives of this research were: 1) to investigate problems of English speaking of primary school students, 2) to investigate needs of a strategic handbook for English speaking Enhancement of primary school students, and 3) to construct a strategic handbook for English speaking Enhancement of primary school students. The population were divided into two groups, namely: 1) 500 students and 2) 10 teachers. The sample groups for the investigation of problems and needs were divided into 2 groups, namely, 1) 222 students (Yamane, 1973) and 2) 10 teachers. In this study, Huajiadi Experimental Primary School was used as a case study. The respondents were obtained through the stratified random sampling technique. Moreover, the 3 specials were used for the focus group discussion meeting. The research instrument employed in this study were questionnaires and a set of questions for the focus group discussion meetings. The questionnaire was evaluated for its validity using IOC (Index of Congruence) and possessed the IOC raging from 0.66 to 1.00. In addition, the reliability of the questionnaire was also evaluated through Alpha Cronbach Coefficient and possessed the value of 0.81. The Likert rating scales were used to rate the degree or level of problems and needs. The information and data collected towards needs and problems were analyzed and presented in terms of frequency count, percentage, mean, standard deviation. The findings indicated that: 1) problems of English speaking of primary school students and needs of a strategic handbook for English speaking Enhancement of primary school students were rated at the “Highest”

levels, 2) the strategic handbook for English speaking Enhancement of primary school students in English speaking in primary Schools comprises of six units; namely, 1) Introduction to English Conversation for Chinese students in primary schools 2) English Conversation for Chinese students for Home Activities 3) English Conversation for Chinese students for school Activities 4) English Conversation for Chinese students in a shopping mall 5) English Conversation for Chinese students for sport class 6) English Conversation for Chinese students at a playground. All of the six units were evaluated for its correctness and suitability in terms of IOC by the 3 specialists and possessed the IOC values from 0.66 to 1.0 meaning the developed handbook for English speaking Enhancement for primary school students was acceptable and could be used as an English speaking teaching handbook for English teachers in Huajiadi Experimental Primary School to enhance the English speaking of the students.

**Keywords:** Strategic Handbook, English speaking Enhancement, Primary School Students

## 1. Introduction

Language is the most frequently used communication tool of mankind. With the increasingly extensive and in-depth foreign exchanges in our country, the People's demand for students' oral expression ability in English is also gradually improving, however, most students still have problems in the input and output process of oral English learning. However, most students still have problems in the input and output process of English oral learning and their English oral expression ability is still unsatisfactory. However, most students still have problems in the process of input and output of English oral expression, and their ability to express themselves in English is still unsatisfactory. The National Program for Medium- and Long-Term Educational Reform and Development (2010-2020) calls for education to produce internationalized human resources with an international outlook who can actively participate in international competition. At the same time, the Compulsory Education English Curriculum Standards (2011 Edition) set out the level 1 and level 2 goals that primary school students should achieve in terms of their ability to express themselves orally in English, which are summarized as "clear intonation, clear speech, and good command of the language". The level 1 and level 2 objectives of primary school students' oral expression ability in English are summarized as "clear speech tone and basic understanding of meaning; being able to have short dialogues about personal and family situations, and being able to tell simple stories under the guidance of the teacher and with the prompting of pictures" (Ministry of Education, 2012). The importance of oral expression in English is becoming more and more obvious, and Professor Nunan in his book vividly compares oral expression to Cinderella's "bossy and haughty" sister, which is not an attack on oral expression, but an allusion to the importance of oral expression in language learning and teaching (Nu, 2002). Cultivating students' oral expression ability in English can help them overcome oral output anxiety, enhance their self-confidence in oral learning, and then promote the effective enhancement of their English proficiency; cultivating students' oral expression ability can also help them improve their comprehensive application ability in listening, reading and writing, because these four skills are complementary and indispensable; cultivating

students' oral expression ability is conducive to providing them with the necessary skills for better adaptation to the globalization of the world, globalization of the economy and globalization of the world's economy, as well as to the development of a new language. he study found that, for primary school students, the focus is on cultivating their oral communication ability when learning a foreign language, and primary school students have natural advantages in this regard. For example, the brain of primary school students is in the stage of growth, functional zoning and functional perfection, which is the sensitive period of shaping and strengthening different functional units of the brain. Their ability to absorb language is 3.5 times that of an adult. Therefore, cultivating students' oral English ability from primary school stage plays a fundamental and important role in the all-round development of students' foreign language skills in the future. This trend is in line with the principle of language acquisition. However, from the overall level of English teaching in our country, students' English skills are very worrying, especially oral communication ability, many students even to the university stage, learning more than ten years of oral English communication ability is still in the street greeting level, which is what experts call "dumb English" (Sun,2004). In a recent global ranking of English proficiency, the Chinese mainland ranked 29th, far behind other Asian countries such as Malaysia, South Korea and Japan. Chinese people learn English from a young age, and students' persistence and effort in English learning must be commendable. English teachers' due diligence is certainly not questionable, but why are students' oral English communicative abilities so poor in today's society? One important reason is that these teachers unwittingly follow the way they taught English in school, so that students' poor oral English skills start in primary school.

## **2. Objective**

- 1) To investigate the problems of English speaking Enhancement of primary school students.
- 2) Needs of a strategic handbook for English speaking Enhancement of primary school students.
- 3) To construct a strategic handbook for English speaking Enhancement of primary school students.

## **3. Review of Literature**

### **3.1 Concepts/Theories/related/research**

Spoken language is the language that people express verbally with each other, and it is the language used for oral communication. Spoken English is the language form of oral communication widely used by people in the English-speaking world countries is a widely used form of oral communication, and it is an important communication and working It is an important carrier of information for people in these countries to communicate and work. Spoken English is characterized by flexibility and freedom. Written language is a form of language used for written expression.

The American linguist Bailey proposed in his work that "spoken language" is an interactive process of constructing meaning, involving output, input and processing of information (Bailey, 2005). It is usually natural, open-ended and gradual, but not entirely unpredictable. In the Common European Framework of Reference for Languages (CEFR), oral expression is considered to take various forms, including oral narratives (academic

presentations, inaugural speeches, congress speeches, etc.); announcements; reading aloud; impromptu speeches; singing and other forms(Council of Europe Committee on Cultural Cooperation and Education,2008). Hedge, an American linguist, discusses the five components of oral expression, including linguistic competence, pragmatic competence, discourse competence, strategic competence and fluency (Hedge, 2000). According to Ms Liu Fenglan, oral expression ability is the ability to communicate with others smoothly in the form of oral language (Liu, 2017). At the same time, some researchers use the concept of In this study, oral expression ability is used. In this study, oral expression ability refers to the ability of primary school students to express themselves verbally in English. In this study, oral expression ability means that in the process of developing oral expression ability in English, primary school students can make short dialogues about their personal and family situations in oral language and can tell short stories in English under the guidance of teachers and with the help of pictures. In this process, the problems of the development of primary school children's oral. In this process, the problem of developing oral expression ability of primary school students in English is closely related to the teaching of teachers and the management of schools.

### 3.2 Conceptual Framework

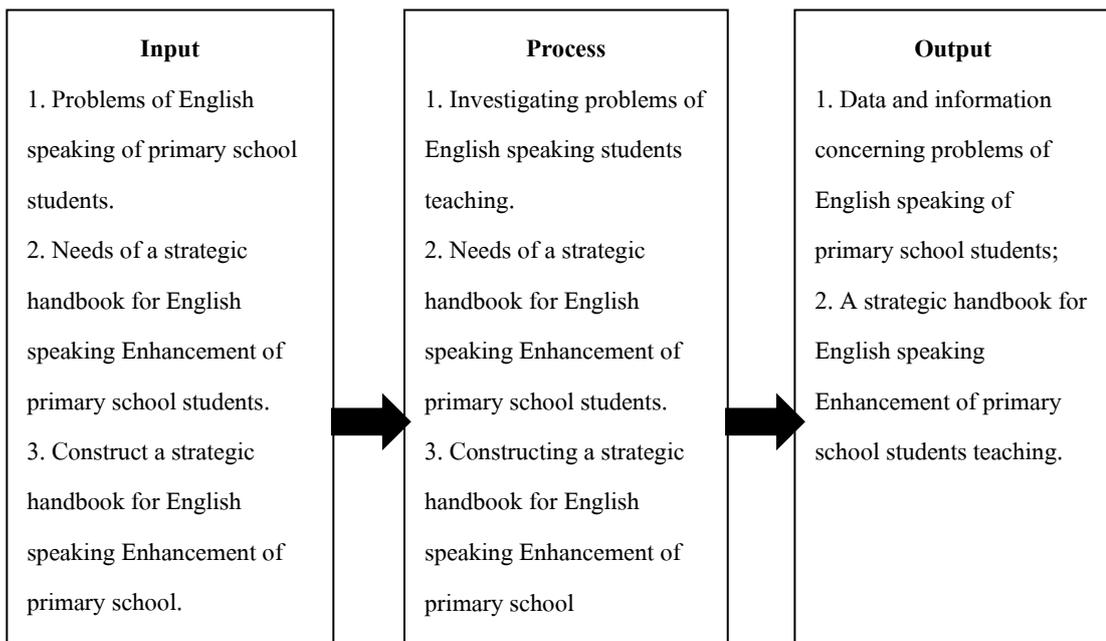


Figure 1 Conceptual Framework

## 4. Reserch methodology

### 4.1 Population /sample

In this research, Huajiadi Experimental Primary School was used as a case study. The population in this research project was divided into 2 groups, namely; 1) 500 students 2) 10 teachers.

The sample groups were divided into 2 groups, namely, 1) 222 students and 2) 10 teachers. The respondents will be obtained through the stratified random sampling technique. Moreover, the 3 specialists will be used to samples for the focus group discussion meeting.

#### **4.2 Research instrument**

The questionnaires were constructed according to the review of other relevant research papers and theories of constructing questionnaires from other related textbooks both in Chinese and English. The questionnaires were evaluated and approved in terms for correctness and suitability of the contents by the three specialists. All of the questions in the questionnaires possessed the IOC (Index of Congruence) value of 0.66 or more, which were acceptable for being used to collect data and information of this research.

#### **4.3 Data collection**

1.1 To collect the data and information for the investigating of the needs and problems of English speaking Enhancement of primary school students in primary Schools, the researcher herself e-mailed questionnaire to the 222 students and 10 teachers, then all of the questions were e-mailed back to the researcher.

1.2 To evaluate the effectiveness of a strategic handbook for English speaking Enhancement of primary school students in English speaking in terms of correctness and suitability of the contents by the three specialists, three focus group meetings were organized. The constructed handbook possessed the IOC (Index of Congruence) value of 0.66 or more for all the six units, which were acceptable for being used as an English speaking handbook for the English teachers and students at Huajiadi Experimental Primary School.

#### **4.4 Data Analysis**

The Data and information collected were analyzed, interpreted and then presented in terms of frequencytrge, mean ( $\bar{X}$ ), standard deviation (S.D.). The Five Point Likert Rating Scale was used to evaluate the respondents' problems of English speaking Enhancement of primary school students in English speaking in primary Schools.

### **5. Research result**

According to table1, it can be indicated that most of the students rated the problems of English speaking Enhancement of primary school students at the highest level of average score ( $\bar{X}$ ) at 4.55 (S.D. = 0.36), where teachers rated the problems of English speaking Enhancement of primary school students at the highest level of average score ( $\bar{X}$ ) at 4.55(S.D. = 0.34).

According to table2, it is indicated that most of the students rated the needs of English speaking Enhancement of primary school students at the highest level of average score ( $\bar{X}$ ) at 4.52 (S.D. = 0.34), where teachers rated the needs of English speaking Enhancement of primary school students at the highest level of average score ( $\bar{X}$ ) at 4.54 (S.D. = 0.36).

According to table3,it was indicated that all the six units evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) were found 0.66

to 1, which were acceptable for being used as an English speaking teaching handbook for the English teachers and students at Huajiadi Experimental Primary School to enhance their English speaking skills and knowledge.

Table 1 Problems of English speaking Enhancement of primary school for students and teachers

Questions	n=222 (students)		n=10 (teachers)		Level of problems
	$\bar{X}1$	S.D.	$\bar{X}2$	S.D.	
	<b>Problems</b>				
1) I don't really like speaking spoken English in school.	4.47	0.20	4.59	0.22	Highest
2) I don't think speaking fluent English is very important.	4.55	0.51	4.60	0.31	Highest
3) I think being able to communicate with others in English is very important in English learning.	4.49	0.35	4.58	0.42	High
5) I can understand half of the English spoken by the teacher in class.	4.53	0.43	4.51	0.40	Highest
6) I won't actively read English textbooks and extracurricular books, watch videos, or listen to English songs in my spare time.	4.60	0.39	4.43	0.39	Highest
7) I spend less than 30 minutes speaking English outside of class every day.	4.59	0.28	4.57	0.37	Highest
8) During English classes, I really enjoy the teacher playing English animations, songs, and telling English stories	4.59	0.26	4.59	0.36	Highest
9) I am afraid of making mistakes in English class and dare not raise my hand to speak.	4.59	0.45	4.57	0.21	Highest
10) When encountering English sentences that I cannot speak, I will find a way to seek advice from others.	4.57	0.37	4.54	0.40	Highest
11) I will take the initiative to have conversations with the teacher in English during class.	4.58	0.40	4.61	0.42	Highest
12) When speaking English, I don't first think out what to say in Chinese.	4.59	0.31	4.65	0.38	Highest
13) I hope to have a conversation and exchange with foreign friend.	4.61	0.29	4.56	0.28	Highest
14) Through learning English, I want to learn more about the culture and customs of Western countries.	4.48	0.37	4.50	0.40	High
4) I can hardly speak English.	4.50	0.29	4.50	0.39	High
15) I usually enjoy playing English games.	4.50	0.43	4.48	0.21	High
<b>Total</b>	4.55	0.36	4.55	0.34	Highest

Table 2 Needs of English speaking Enhancement of primary school for students and teachers

Questions	n=222		n=10		Level of needs
	(students)		(teachers)		
	$\bar{X}_1$	S.D.	$\bar{X}_2$	S.D.	
<b>Needs</b>					
1) Speaking English is very important.	4.56	0.23	4.50	0.21	Highest
2) In English learning, I need to speak fluent English.	4.50	0.41	4.58	0.29	High
3) Being able to communicate with others in English is very important in English learning.	4.53	0.32	4.50	0.38	Highest
4) Speaking spoken English can improve my oral English expression skill.	4.47	0.29	4.56	0.39	High
5) Teachers using English in class can help students improve their oral English expression skill.	4.45	0.45	4.51	0.50	High
6) It is important to actively read English textbooks and extracurricular books, watch videos, and listen to English songs in your spare time.	4.43	0.43	4.53	0.39	High
7) After school, students need to spend no less than 30 minutes speaking English outside of class every day.	4.53	0.27	4.48	0.36	Highest
8) During English class, the teacher needs to play English animations, songs, and tell English stories.	4.57	0.34	4.52	0.40	Highest
9) I need to actively raise my hand to speak in English class.	4.60	0.21	4.49	0.41	Highest
10) It is a good learning habit to seek advice from others when encountering English sentences that one cannot speak.	4.50	0.41	4.44	0.5	Highest
11) Students need to actively engage in English conversations with teachers during class.	4.51	0.45	4.59	0.32	Highest
12) It is good to use Chinese to assist oneself when speaking English.	4.54	0.39	4.62	0.38	Highest
13) In school, it is necessary to make more friends with foreigners to learn English.	4.61	0.28	4.58	0.29	Highest
14) The culture and customs of Western countries can help me improve my English proficiency.	4.45	0.47	4.60	0.39	High
15) Playing English games can increase my interest in learning.	4.62	0.20	4.63	0.23	Highest
<b>Total</b>	<b>4.52</b>	<b>0.34</b>	<b>4.54</b>	<b>0.36</b>	<b>Highest</b>

Table 3 The Index of Congruence (IOC) of the six units as well as in each unit terms of correctness and suitability of the contents

Topics/Contents	IOC
Unit1: Introduction to English Conversation for Chinese students in primary schools	0.66
Unit2: English Conversation for Chinese students for Home Activities	1.0
Unit3: English Conversation for Chinese students for school Activities	0.66
Unit 4: English Conversation for Chinese students in a shopping mall	0.66
Unit 5: English Conversation for Chinese students for sport class	0.66
Unit 6 English Conversation for Chinese students at a playground	1

## 6. Discussion of the Reasearch Resultls

### 6.1 Needs and Problems of English speaking Enhancement of primary school

The findings from the investigation of English speaking Enhancement of primary school in Huajiadi Experimental Primary School. Chinese students as using English as a foreign language, the speaking of Chinese and English language rules are different; therefore, Chinese students get confused of the two languages. For teachers, teachers' low attention to oral English teaching, lack of communicative classroom teaching, and insufficient grasp of students' age characteristics. it is correspondent with Marriam Bashir(2021) the findings include that More than half of the teachers use English as a medium of instruction. Students also reported the same. Both teachers and students are using interactive technique for teaching learning process. Teachers as well as students have the view that English is better medium of instruction than Urdu. Teachers are also using mother language during instruction. Teachers and students are promoting questioning and answering in English. Teachers are using helping material for their effective teaching.

### 6.2 A Handbook for English speaking Enhancement of primary school students teaching: a Case Study of Huajiadi Experimental Primary School.

The contents in each unit focusing on English speaking in primary Schools the extracted from referable and reliable sources and were then simplified to be suitable for the knowledge level for English speaking learners. The part of practice in the English speaking handbook in the English speaking contexts for the teachers in Huajiadi Experimental Primary School focus on practicing and enhancing English speaking skills for comprehension of describing the details and information from the practice correctly and clearly. The contents of all practices encouraging learners to study English speaking well. And the learners must be able to apply the knowledge obtained from the exercises to the real situations. This is correspondent with Marriam Bashir (2021). this helps the learners practice and develop their intelligence and competency in English speaking learning. For students, to participate in English speaking teaching, they must learn to adjust their mentality, understand that English

speaking teaching is not a holiday, and must adapt to the home learning environment; at the same time, parents should also provide certain supervision and guidance within their capabilities.

## 7. Rescommmendation for futher study

1) It is necessary for the researcher to comprehensively analyze the factors affecting the development of primary school students' oral expression in English. Peer interactions also have a greater impact on elementary school students' oral language learning.

2) The researcher should be continue to enrich our theoretical knowledge, enhance our research ability, and commit ourselves to academic inquiry and teaching practice for the teaching of spoken English in elementary school.

## 8. Acknowledgenment

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Ms.Gao yanyan

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## **Developing Strategic Guidelines for Online Teaching of Mathematics for Middle School Students: A Case Study of ChongQing No. 1 Secondary School China**

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### **ABSTRACT**

The objectives of this research were: 1) to investigate needs of online teaching of mathematics of Middle school students , and 2) to develop strategic guidelines for online Teaching of Mathematics for middle school ChongQing No. 1 Secondary School in China. The population was divided into 2 group; namely, 1) 3000 students, and 2) 50 mathematics teachers. The sample groups for this study were divided into two groups; namely, 1) 284 students, derived from Yamane formula (Yamane, 1973), and 2) 30 mathematics teachers. The sample groups were obtained through stratified random sampling. Moreover, 3 specialists were invited for the focus group discussion meetings to share ideas, suggestions and comments for developing strategic guidelines for online teaching of Mathematics for Middle School students. The research instruments employed in this study were a questionnaire and a set of questions for focus group discussion. The research instrument for this study included: 1) questionnaires for the investigation of problems and needs of online teaching of mathematics of Middle school students, and 2) sets of questions for the 3 focus group discussion meetings. The questionnaires were evaluated for its validity through the Index of Item-Objective Congruence (IOC) and possessed the value in the range of 0.67 to 1.00. The questionnaires for investigation of problems and needs were collected online. The collected information and data were then analyzed, interpreted and presented in terms of frequency counts, mean, and standard deviations. The findings from this research indicated that students and mathematics teachers of ChongQing No. 1 Secondary School in China rated the problems of online teaching of mathematics of Middle school students at the “Highest” level. In addition, the developed strategic guidelines for online teaching of Mathematics for middle school students, such as pre course, pre-study based on online teaching, classroom

teaching based on online, and optimization of homework based on online teaching and learning are vital for enhancing the effectiveness of online teaching of mathematics for middle school students.

**Keywords:** strategic guidelines, online teaching, Mathematics, middle school students

## 1. Introduction

Mathematics in middle school is crucial because it is such a basic subject. It's a fundamental skill we use every day and a required course load staple in both secondary education and higher education. As they move through middle school, students are sometimes left feeling lost as they are introduced to increasingly logical and abstract mathematics ideas. To excite students' interest and aid in their knowledge of mathematics, the Internet can be used in the classroom.

The "Education Informatization Action Plan" and "China Education Modernization 2035" were issued by the government in response to the "19th National Congress," which outlined the new requirements for informatization and modernization in education; furthermore, online education enables individualized, cutting-edge technological education. The ever-increasing capabilities of today's computing infrastructures have improved online education by enabling the rapid growth of information technology and intelligent technology. Because of the epidemic, distance learning has become the norm. The effect of online education in middle schools is somewhat different from that in universities, which has led many experts to conclude that it is not optimal at now. While traditional classrooms still have their place, online education has emerged as a major player in meeting today's most pressing educational, societal, and public health challenges. Research into the effectiveness of online mathematics instruction for middle school kids is urgently needed because those years are so crucial for setting the stage for later academic achievement. The widespread availability of digital resources has transformed the educational system, providing students with more flexibility and easier access to course materials through online learning platforms. Despite the growing popularity of online courses, some critics question whether they can truly replace face-to-face classes.

Schools across the country implemented robust online teaching programs in accordance with district guidelines in response to the "COVID-19" pneumonia epidemic that broke out at the beginning of 2020 (Ministry of Education, 2020). There has been a rise in the popularity of online universities in recent years. At the same time, Li Zhengtao stressed the importance of both online and traditional education existing side by side. With the post-panic era posing new problems to education (Li Zhengtao, 2020), many schools are implementing an approach called as dual-line integration, which mixes traditional classroom learning with internet resources.

The rapid development of network technology during the current epidemic has facilitated the expansion of online educational opportunities. Online teaching methods have also made their way into middle schools. Because of its many benefits, network instruction in mathematics has arisen as a potential new field of study, and many teachers have incorporated the effective strategies created during this time into their everyday curriculum. The state has prioritized the informatization of education and published a lot of publications in this area as

"Internet+Education" and "Artificial Intelligence+Education" continue to develop. Information technology has a revolutionary impact on education development, and promoting the development of 'Internet+ Education,' accelerating modernization of education, and building a strong education nation are all new opportunities and challenges brought about by the wave of technology, as stated in the recently released "Education Informatization 2.0" Action Plan by the Chinese Education Ministry. A blank slate on which to face future challenges. Online education is an integral part of the "Internet + Education" equation. In light of the challenges presented by new technology and a new era, it is imperative that we as educators take a hard look at the pros and cons of our existing methods of education.

## **2. Research Objective**

- (1) To investigate needs of online teaching Mathematics for Middle School students.
- (2) To develop strategic guidelines for online teaching of Mathematics in middle school students.

## **3. Literature Review**

### **3.1 Theory, Concept and Related Research**

According to the literature on online teaching at home and abroad, it can be found that the research on online teaching at home and abroad has made certain achievements, and the fields involved in the research are relatively comprehensive. However, there are still some shortcomings in domestic and international research, such as domestic research on the effect of online teaching is more concerned about college students and university online courses before the epidemic, and there are relatively few researches on the online teaching of secondary school students, secondary school students and college students are at different ages, and there are big differences between their motivation to learn, learning initiative, and learning ability, etc.; secondary school teachers and college teachers also have big differences in professional knowledge, teaching and research ability, and information literacy, etc. There have been studies on online teaching for college teachers and students as well as for college students. Secondary school teachers and college teachers are also very different in terms of professional knowledge, teaching and research ability, and information literacy, etc. There is a lack of research on whether the theories about college teachers and students and online courses in colleges and universities can be applied to the online teaching of secondary school students and teachers, and there is a lack of verification. Most of the researches on the effect of online teaching in secondary schools that appeared after the epidemic only summarized the problems and situations of online teaching during the epidemic and put forward relevant countermeasures to solve the problems of online teaching based on the phenomenon on the surface, but there is a lack of empirical analyses based on the actual data modeling, which can prove the influencing factors affecting the effect of online teaching of secondary school students and propose targeted measures to improve the online teaching of mathematics in secondary schools based on the influencing factors. There is a lack of empirical analysis based on model data after modeling, which proves the influencing factors affecting the effectiveness of online teaching for secondary school students and proposes strategies to improve the effectiveness of online

teaching of secondary school mathematics according to the influencing factors. Although foreign studies, such as those in the United States, had abundant research on online teaching in primary and secondary schools before the epidemic, the research was only upgraded to the theoretical level, and it was proved that these existing theories could not guide the practice of online teaching in secondary schools very well.

To summarize, this study refers to domestic and international research on the effect of online teaching, explores the influencing factors of the effect of online teaching in secondary schools, and proposes strategies to improve the effect of online teaching according to the influencing factors, so as to provide reference and guidance for the effective development of online teaching in secondary schools.

### 3.2 Research Framework

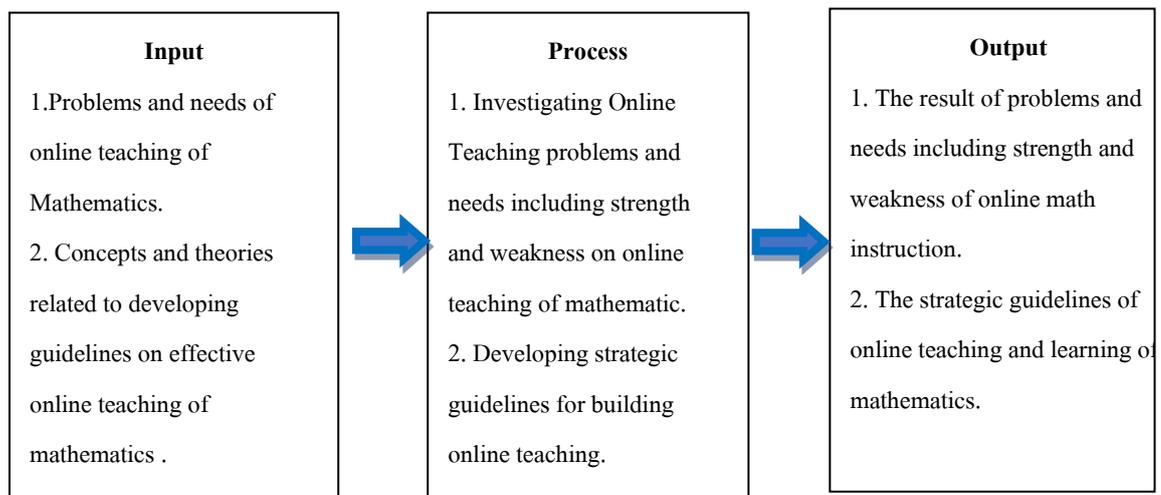


Figure 1 Research Framework

## 4. Research Methodology

### 4.1 Research Design

This research applies both qualitative and quantitative approach.

### 4.2 Population and Sample

Population: This study conducted at Chongqing No. 1 Middle School. The population was divided into two groups: 1) 3000 students and 2) 30 math teachers

Samples Groups: The sample group for this study was divided into two groups: 1) 284 students, derived from Yamane formula (Yamane, 1973) and 2) 30 mathematics teachers. The sample groups were obtained through stratified random sampling technique.

### 4.3 Research Instrument

1. Questionnaires: The questionnaire was divided into 2 sets; namely, 1) students set and 2) teachers set. The questionnaire was divided into 2 parts: 1) general information, 2) The problems and needs of mathematics online teaching. The questionnaire was evaluated for its validity by the Index of Item-Objective Congruence (IOC) by the three specialists. Each question in the questionnaire was in the range of IOC 0.67 to

1.00. In addition, the questionnaire was evaluated for its reliability by the Alpha Cronbach Coefficient with the value of 0.83.

2. A set of questions for the focus group discussion meeting: To develop strategic guidelines for online teaching of mathematics for middle school students, a set of questions for the focus group discussion meeting. The 3 specialists were invited to participate in the 3 focus group discussion meetings to recruit ideas, suggestions and comments for the correctness and suitability of the strategic guidelines. The correctness and suitability of the strategic guidelines were evaluated in terms of IOC at the range of 0.67 to 1.00.

#### **4.4 Data Collection**

The time period covered by this research is July 2023 to late August. The process of collecting and analyzing data follows a strict protocol that ensures accurate and complete information on all essential factors. By doing so, we want to propose solutions to our research problems, validate our theories, and assess the quality of our data. It is well-known that primary research requires considerable time and energy. Interviews, surveys, questionnaires, and other similar procedures are used to collect data. The questionnaire served as the main data collector for this study. In the context of data collecting, "data collection instruments" refers to the many resources and methods used to amass data, such as written surveys and interview-facilitating software. The researchers were enthusiastic about collecting data with the help of the online application. Data collecting has made considerable use of the Wenjuanxing. Researchers may use this program to build online surveys and distribute links to such surveys across various social media platforms in order to collect information. Over the course of around 40 days, this study collects data by sending out this link to a WeChat group. In this research project, the researcher herself collected data and information from the sample group online via e-mail. The researcher submitted a letter of permission in advance to the school director requesting permission to collect data and information from the sample group at Chongqing No. 1 Middle School.

#### **4.5 Data Analysis**

1) The Data and information collected were analyzed, interpreted and then presented in terms of frequency court, percentage, mean ( $\bar{X}$ ), standard deviation (S.D.). The Five Point Likert Rating Scale was used to assess the needs of the respondents in online teaching of mathematics.

2) The ideas and comments of the 3 specialists obtained from the focus group discussion meeting, were analyzed and then used to correct and improve the contents of the strategic guidelines.

## 5. Research Findings

### 5.1 Needs of Online Learning

Table 1: Needs of Online Learning of Mathematics for Students

Questions	n=284		Level of Needs
	$\bar{X}$	S.D.	
1) Online learning helps students enhance the effectiveness of learning process.	4.53	0.20	Highest
2) You are confident in online learning.	4.58	0.48	Highest
3) Your teacher think that some traditional event or mathematician had a significant impact on the development of mathematics.	4.61	0.33	Highest
4) Online learning helps you to speed up your learning tasks.	4.56	0.57	Highest
5) Online courses are rich in resources and materials and easy to connect.	4.63	0.47	Highest
6) Online learning normally increase students' interest in learning mathematics.	4.51	0.27	Highest
7) The online learning equipment usually works quickly due to good connection.	4.53	0.21	Highest
8) Online learning normally helps students to review the lesson.	4.61	0.21	Highest
9) Online learning resources are more abundant.	4.67	0.48	Highest
10) Online courses are normally easy to download or to save files.	4.62	0.37	Highest
Total	4.63	0.39	Highest

The table 1 shows that most of the students rated the need for online learning at the highest. It shows that most of the students are very favorable to the playback function of online teaching and broadening their horizons. The home devices are also smoother and there is a lot of interaction between students. The majority of students rated the needs with online math instruction with the highest mean score (=4.63, S.D. =0.39).

**2) Teachers**

Table 2: Needs of Online Teaching for Teachers

Questions	n=30		Level of Needs
	$\bar{X}$	S.D.	
1) Online teaching helps enhance the effectiveness of teaching process.	4.54	0.21	Highest
2) You are confident in online teaching.	4.57	0.47	Highest
3) Online teaching helps you to speed up your teaching tasks.	4.62	0.34	Highest
4) Online courses are rich in resources and materials and easy to connect.	4.55	0.56	Highest
5) The video playback feature normally facilities you to complete the course playback.	4.66	0.49	Highest
6) The online teaching equipment usually works quickly due to good connection.	4.49	0.25	High
7) Online teaching normally increase students' interest in learning mathematics.	4.56	0.24	Highest
8) Online teaching normally helps students to review the lesson.	4.58	0.20	Highest
9) Online teaching resources are more abundant.	4.56	0.47	Highest
10) Online courses are normally easy to download or to save files.	4.61	0.36	Highest
<b>Total</b>	<b>4.60</b>	<b>0.39</b>	<b>Highest</b>

As can be seen in table 2, the majority of teachers perceived the highest level in the questions concerning about the needs for online math instruction (mean score = 4.60, S.D. = 0.39). Among these questions, most of teachers stated that the video playback feature normally facilities them to complete the course playback is in the first rank, and at the highest level. (mean score = 4.66, S.D. = 0.49)

**6. Discussion**

From the needs of students and teachers towards the online teaching of mathematics and the discussion of specialists in focus group discussion, can be summarized as the strategic guidelines for online teaching of mathematics as follows:

**6.1 Pre-course, pre-study based on online teaching**

Students can get a head start on their studies by watching a preview of the unit's material before diving into the online training. What is covered in distance learning programs? Students can start preparing for classes weeks in advance because to the micro course learning platform's ability to upload course materials ahead of time.

In order to help students get ready for class on their own time and in their own style, we provide them with the resources they need. Taking the simple example of adding a few to pre-test their pupils' comprehension of a topic, a teacher might, for instance, film a short video of themselves drawing a line segment before class, and then have them build a line segment graph using a fraction of a number.

A teacher can help students make progress in their production by utilizing segment diagrams to explain the concept of fractions and their link to the total. Students will have an easier time learning how to compute a fraction of a number with the help of micro videos for online pre-teaching and line graphs for visualizing the ideas. When students of varied abilities have access to online pre-teaching, they can fill in knowledge gaps with that guidance, leveling the playing field for their learning.

### 6.2 Classroom Teaching Based on Online Instruction

The two most significant variables in students' active involvement with online learning are the students' own motivation and interest in the subject matter. The first step in creating a positive learning environment for kids is for teachers to emphasize the importance of using instructional methods and information technology. There are a number of variables that can affect a teacher's effectiveness in the classroom. Focusing on instructional methodologies and technology, creating a welcoming classroom environment, and giving students adequate support are all important factors. Instructors can increase their students' receptivity to learning in an online classroom by using a wide range of media, including but not limited to images, text, music, and video, in their courses. In order to get more out of the challenging material.

For example, a video lesson could inquire, "Which wheel runs the fastest?" while showing a pupil pulling a cart with different shaped wheels (square, circle, triangle, and rectangle). Students will have a solid grasp of the "wheel" in this context after they have completed the necessary investigation, analysis, and verification.

Students will get a thorough understanding of the practical justification for the wheel's round design after conducting appropriate study. Therefore, teachers should always monitor their students' electronic gadgets. Students can have a deeper understanding of mathematics when video replay is used in the classroom. The consequence will be an increase in kids' interest in and proficiency in mathematics.

### 6.3 Optimization of Homework Based on Online Teaching and Learning

Homework is crucial to kids' learning and development because it reinforces what they've already learned and forces them to apply it in new contexts. Because students will be completing tasks and receiving feedback on this platform, teachers need to pay particular attention to its configuration as they conduct online education. To reduce instructors' workloads and improve the quality and efficiency with which they grade homework, it primarily organizes assignments in accordance with the subject matter covered in online classes, and its accompanying checklist can be generated automatically. The homework tool was designed with sixth through eighth graders' distinct mental capacities in mind.

Teachers motivate students to study on their own by giving them a wide range of activities to do, such as multiple-choice quizzes, application and calculation problems, and short-answer essays. After logging into the

site, students may complete projects and check their work independently, while teachers can grade and change assignments with a single click. When kids turn in their work, teachers can use one-key correction to quickly make appropriate comments, send home copies of the work, and trust that parents will keep an eye on it.

## **7. Suggestion**

(1) The effectiveness and continued relevance of online education are contingent on the calibre of instruction that takes place in virtual classrooms. Quality enhancement and technological innovation should both be treated as top priorities. You can get the most out of your time spent studying online if you follow these tips. Pedagogical techniques, such as course rotations and sequencing, can be developed and implemented through both short-term and long-term planning. Start analyzing the assumptions and biases that universities have about online learning and push them to reconsider their stance. To maintain its survival and legitimacy, online courses must be held to the same expectations and standards as traditional classroom courses.

(2) Student access to online learning resources and a designated study space is guaranteed by the platform, as stated by Yu et al. (2019). If the platform is well-designed, students can anticipate a relatively high-quality educational service and learning environment. Allow students the opportunity to broaden their perspectives and their worldview. The platform's educational materials' intelligent arrangement will also have an impact on students. Distance learning relies heavily on the accessibility of online materials. Students need access to a wide range of high-quality materials on the web so they can personalize their online learning experience to best suit their goals. The effectiveness of an online course also depends on the design of its functional modules and how simple it is for students to access them. In online education, the Internet serves as the primary medium for student-to-teacher and teacher-to-student communication. If the learning platform is able to provide such an environment, then students will be able to engage with the content in a way that enhances their learning.

## **8. Acknowledgement**

In the future, we should emphasize the diversity of data sources and make good use of interviews to enhance the persuasiveness of the study. We should explore more dimensions to make the study more comprehensive and three-dimensional. We should follow the path from practice to understanding and then to practice, and utilize the actual data to conduct empirical analysis and propose strategies, so that the strategies can provide more effective guidance for the development of online teaching activities in Middle schools.

At the same time, in the future offline teaching process, we should consciously promote the experience of using efficient tools accumulated in online teaching, and constantly explore and improve the effective methods of online teaching, so as to develop the internal motivation of students' participation in the classroom.

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**A Development of Guidelines for the Enhancement of Self-confidence for Foreign Students: A Case Study of Tsinghua University**

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**ABSTRACT**

The objectives of this research were: 1) to investigate problems of the self-confidence of foreign student, 2) to investigate needs of enhancement for self-confidence of foreign student, and, 3) to develop guidelines for enhancing self-confidence of foreign students. In this study, Tsinghua University was used as a case study. For the investigation of problems and needs, the populations were divided into 2 groups; namely, 1) 2541 students and 2) 80 teachers. The sample groups for the investigation of problems and needs were divided into 2 groups; namely, 1) 346 students and 2) 80 teachers. Moreover, the 3 specials were used for the focus group discussion meeting. The research instrument employed in this study were questionnaires and a set of questions for the focus group discussion meetings. The information and data collected were analyzed through the content analysis method and presented in terms of frequency count, mean values, standard deviation. The Likert rating scales were used to rate the degree or level of problems and needs. The findings indicated that: 1) problems of the self-confidence of foreign student were in the “Highest” level, 2) needs of enhancement for self-confidence of foreign students were also in the “Highest” level. The guidelines for enhancing self-confidence of foreign students comprises of 4 units; namely, 1) What a successful international student needs to be able to do 2) Confidence is standard for international students; 3) How can international students become more confident and successful? 4) Ways for international students to become more independent and confident. All the four units evaluated by the

three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.66 to 1.0 meaning the Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University for teacher was acceptable and could be used as Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University to enhance their self-confidence and competence.

**Keywords:** Guidelines, Foreign Students, Self-confidence

## **1. Background**

International education has now become a necessary wing in global education. This move has been gladly embraced by China and has placed it on a path to attract foreign students from all over the world. Currently, internationalization of higher education in China, has in recent decades seen great progress and has placed China as an emerging leading global strong hold in international education, thereby moulding China's educational system into one of the most promising, largest and affordable in the world (Yang, 2014). Reports, indicates that presently, China, attracts a large number of international students from all over the world (Ma, 2017). The following are data from the statistical report on international students in China for the year 2018 by the Chinese Ministry of Education (Ministry of Education, 2019). International students have with academic success are associated with factors. It is not clear how these issues or resources affect students' overall success in completing their programs of study. It is important to determine if there is an association between each of the issues measured (community acceptance, language ability, academic ability, and financial stability) and students' confidence in completing their studies. Knowing the effect associated with each issue can assist colleges and universities in allocating resources to the international students' areas of need. As a result, all academic institutions catering to international students can benefit from higher retention rates and student satisfaction. International students attending the University of Tsinghua were surveyed in order to determine how their confidence or lack of confidence in completing their programs of study is related to each of the issues. Young college students are in a period of formation and stability of their outlook on life and values, as well as a period of most urgent and serious concern for a series of issues such as attitude towards life, lifestyle, and survival value. Their self-identity is gradually established, and Yushaoduo is truly focused on considering oneself, which is an important period for exploring and establishing oneself (Lin Chongde, 1995).

## **2. Objectives**

1. To investigate problems of the self-confidence of foreign student.
2. To investigate needs of enhancement for self-confidence of foreign student.
3. To develop guidelines for enhancing self-confidence of foreign students.

### 3. Review of Literature

#### 3.1 Concepts/Theories/Related Research

Different researchers define confidence differently. Maslow (1987) believes that confidence arises when self-esteem needs to be satisfied. An emotional experience that is a part of the hierarchy of human needs, including the acquisition of skills, abilities, confidence, and success. The desire for independence, freedom, and so on. Shrauger (Wang, 1993) believes that confidence is an individual's perception of their own abilities, which is self-able to handle subjective evaluations of the environment and consider confidence as a component of self-esteem. Corey believes that since Faith is an individual's perception of themselves, including their sense of self-esteem and self-acceptance, which is linked to their self-concept. Department is a feeling of value and ability. Basch (1984) believes that confidence is a person's feeling of themselves, and the key lies in their ability. Dickstein (1997) believes that confidence is generated by individuals playing a certain role and a specific field. A sense of self-efficacy. Jackson (1984) pointed out that confidence is a relatively persistent personality tendency, but it is also easy to root out. The self-evaluation state that changes according to the changing situation. Coopersmith (1967) believes that confidence is an individual's sustained commitment to themselves. Evaluation, which includes aspects such as one's own abilities, identity, status, achievements, and values, as well as their degree, is an attitude of praise and affirmation towards oneself. Confidence is a multidimensional concept and an important component of self-awareness. It is also related to abilities and value judgments in self-concept. Through literature research, it has been found that confidence has two different states: trait confidence and state confidence. The former varies depending on the situation, role, feedback, and event, and is a temporary state. Variable dynamic confidence; The latter is a static confidence formed and maintained for a considerable period of time during individual development, which is more stable than the former.

#### 3.2 Conceptual Framework

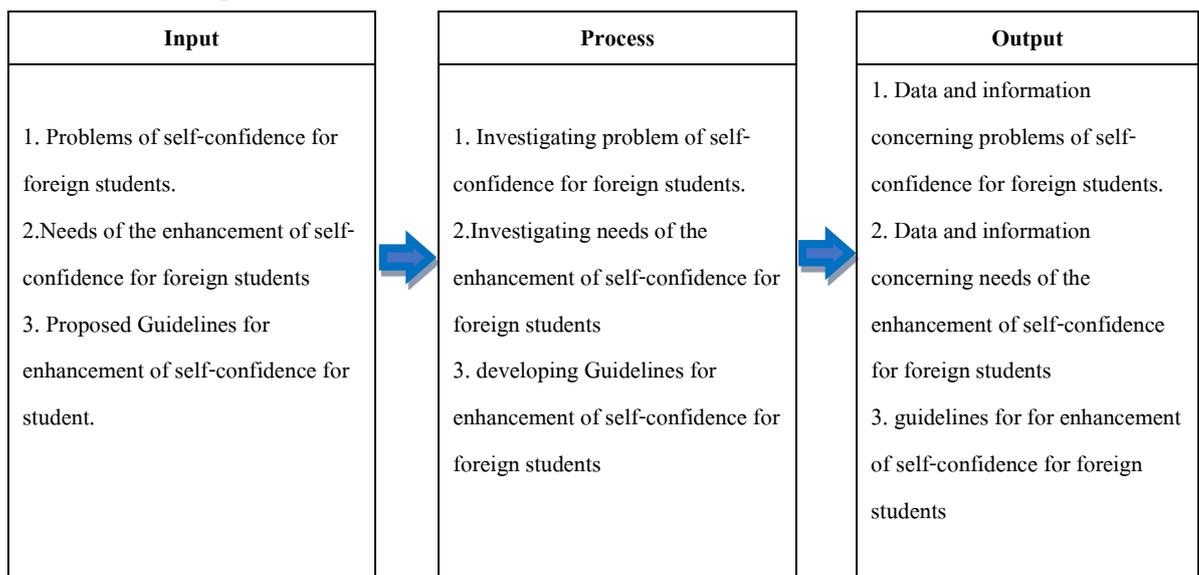


Figure 1 Conceptual Framework

## **4. Research methodology**

### **4.1 Population/Sample groups**

Tsinghua University was used as a case study. In this study, the population was divided into 2 groups; namely, 1) 2,541 students and 2) 80 teachers. The sample groups in this study were divided into 2 groups: namely, 1) 346 students (Yamane, 1973) and 2) 80 teachers. The sample groups were obtained through stratified random sampling technique.

### **4.2 Research Instruments**

1) Questionnaires: In this research project, a questionnaire was employed for the data collection. The questionnaire was divided 3 parts; namely, 1) problems of the self-confidence of foreign student, and 2) needs enhancement for self-confidence of foreign student. The questionnaire was evaluated for its validity by the Index of Congruence (IOC) by the three specialists. Each question in the questionnaire was in the range of IOC 0.66 to 1.00. In addition, the questionnaire was evaluated for its reliability by the Alpha Cronbach Coefficient with the value of 0.83.

2) A set of questions for the focus group discussion meeting: To develop guidelines for enhancing self-confidence of foreign students, a set of questions for the focus group discussion meeting. The 3 specialists were invited to participate in the 3 focus group discussion meetings to recruit ideas, suggestions and comments for the correctness and suitability of the strategic guidelines. The correctness and suitability of the strategic guidelines were evaluated in terms of IOC at the range of 0.66 to 1.0.

### **4.3 Data collection**

For the investigation of problems and needs, the researcher herself collected the data and information from the sample groups online via emailing. Moreover, the three focus group discussion meetings were conducted to recruit the comments, ideas and suggestions for the correctness and improvement of the strategic guidelines.

### **4.4 Data Analysis**

1) For the investigation of problems and needs, the Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems. For the rating reference table of The Five Point Likert Rating Scale, see table 3.1

2) For the correctness and improvement of the strategic guidelines, the ideas, suggestions and comments of the 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the guidelines.

## 5. Research Results

### 5.1 Problems of teaching/learning the self-confidence of foreign student

#### 1) Problems the self-confidence of foreign students

Table 2: Problems of the self-confidence of foreign student in the opinions of Students

Questions	n=346		Level of Problems
	$\bar{X}$	S.D.	
1) Most students have confidence in themselves.	4.69	0.20	Highest
2) Students often sign up to participate in various competitions.	4.55	0.51	Highest
3) Students believe that communication with teachers is important.	4.56	0.33	Highest
4) Students do not like to answer questions in class.	4.64	0.57	Highest
5) Sometimes students are unable to overcome difficulties in their studies.	4.56	0.47	Highest
6) International students are concerned about cultural differences and do not like to communicate with locals.	4.58	0.28	Highest
7) Faced with heavy teaching tasks and the pressure of further education, they still energetic in learning.	4.65	0.21	Highest
8) Students can effectively study on students' psychological characteristics.	4.55	0.21	Highest
9) International students are confused about their future.	4.58	0.48	Highest
10) I have often been involved in self-confidence development related competitions.	4.66	0.51	Highest
Total	4.60	0.37	Highest

It can be seen from Table 2 that most of the students evaluated the problems of the self-confidence of foreign student. The average score is the highest level (= 4.60, S.D. = 0.37).

#### 2) Problems of teaching the self-confidence of foreign student

Table 3: Problems of teaching the self-confidence of foreign student (Teachers)

Questions	n=80		Level of Problems
	$\bar{X}$	S.D.	
1) Most students have confidence in themselves.	4.56	0.21	Highest
2) Students often sign up to participate in various competitions.	4.57	0.48	Highest
3) Students believe that communication with teachers is important.	4.67	0.32	Highest
4) Students do not like to answer questions in class.	4.59	0.55	Highest
5) Sometimes students are unable to overcome difficulties in their studies.	4.69	0.45	Highest
6) International students are concerned about cultural differences and do not like to communicate with locals.	4.66	0.24	Highest
7) Faced with heavy teaching tasks and the pressure of further education, I am still energetic in teaching international students.	4.60	0.20	Highest
8) Teachers can effectively teach based on students' psychological characteristics.	4.63	0.20	Highest
9) International students are confused about their future.	4.68	0.47	Highest
10) I have often been involved in self-confidence development related competitions.	4.59	0.47	Highest
Total	4.63	0.35	Highest

According to table 3, it can be seen that the majority of teachers rated the inclusion of teaching the self-confidence of foreign students as the highest level (mean score = 4.63, S.D. = 0.35).

**5.2 Needs of enhancement for self-confidence of foreign student.**

**1) Needs of enhancement for self-confidence of foreign student.**

Table 4: Needs of enhancement for self-confidence of foreign student (Students)

Questions	n=346		Level of needs
	$\bar{X}$	S.D.	
1) Students need to have confidence in themselves.	4.69	0.41	Highest
2) Students need to participate in various competitions.	4.55	0.38	Highest
3) It is important for foreign students to communication with teachers.	4.56	0.20	Highest
4) Students need to answer questions in class.	4.64	0.37	Highest
5) It is important for foreign students to overcome difficulties in their studies.	4.56	0.50	Highest
6) Communicate with locals without worrying about cultural differences.	4.58	0.41	Highest
7) Faced with heavy learning tasks and the pressure of further education, foreign students need to keep energetic in learnig.	4.65	0.52	Highest
8) It is important for foreign students that students can effectively learn based on students' psychological characteristics.	4.55	0.44	Highest
9) International students need to prepare their future.	4.58	0.42	Highest
10) I have often been involved in self-confidence development related competitions.	4.66	0.20	Highest
Total	4.60	0.39	Highest

As can be seen from Table 4, most students rated the need of enhancement for self-confidence of foreign student as the highest average score (=4.60, S.D.=0.39).

**2) Needs of enhancement for self-confidence of foreign student of teachers**

Table 5: Needs of enhancement for self-confidence of foreign student of teachers

Questions	n=80		Level of needs
	$\bar{X}$	S.D.	
1) Students need to have confidence in themselves.	4.51	0.40	Highest
2) Students need to participate in various competitions.	4.57	0.37	Highest
3) It is important for foreign students to communication with teachers.	4.59	0.20	Highest
4) Students need to answer questions in class.	4.59	0.35	Highest
5) It is important for foreign students to overcome difficulties in their studies.	4.69	0.47	Highest
6) Communicate with locals without worrying about cultural differences.	4.66	0.42	Highest
7) Faced with heavy teaching tasks and the pressure of further education, foreign students need to keep energetic in learnig.	4.58	0.52	Highest
8) It is important for foreign students that teachers can effectively teach based on students' psychological characteristics.	4.67	0.43	Highest
9) International students need to prepare their future.	4.68	0.41	Highest
10) I have often been involved in self-confidence development related competitions	4.59	0.20	Highest
Total	4.62	0.35	Highest

It can be seen from Table 4.6 that most teachers evaluated the need Needs of enhancement for self-confidence of foreign student of teachers The mean score was the highest level (= 4.62, S.D. = 0.35).

### **5.3 Guidelines for the enhancement of self-confidence for foreign students.**

Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University for teachers in university of Four units; namely, unit1, What a successful international student needs to be able to do! ;unit2,Confidence is standard for international students; unit 3, How can international students become more confident and successful? unit 4, Ways for international students to become more independent and confident. All the four units evaluated by the three specialists (One Thai professors and two English native speakers) in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.66 to 1.0 meaning the Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University for teacher was acceptable and could be used as an Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University to enhance their self-confidence and competence.

## **6. Discussion of the Research Results**

According to the results from this study, it can be concluded that most of the students rated the problems of of the self-confidence of foreign student at the “Highest” level ( $x= 4.60$ , S.D. = 0.37). Similarly, most of the teachers rated the problems of the self-confidence of foreign student at the “Highest” level ( $x= 4.63$ , S.D. = 0.35). According to the results from this study, it can be concluded that most of the students rated the needs of enhancement for self-confidence of foreign student at the “Highest” level ( $x= 4.60$ , S.D. = 0.39). Similarly, most of the teachers rated the needs of enhancement for self-confidence of foreign student at the “Highest” level ( $x= 4.62$ , S.D. = 0.35) Confidence is an essential psychological quality for individuals and one of the essential qualities in the growth process of college students. In the process of studying in college, the improvement of self-confidence can encourage students to have more opportunities to engage in extensive language practice, thereby improving their academic performance. The improvement of academic performance will also increase students' confidence in learning, forming a good cycle of "confidence enhancement - language practice increase - performance improvement - confidence enhancement". The improvement of self-confidence not only promotes students' psychological health and growth, but also promotes their personality improvement. It is also conducive to achieving the quality education goals of international students in the discipline, reflecting the humanistic nature of confident teaching in universities. As facilitators, guides, and helpers in the learning process of students, university international teachers should not only focus on helping students accumulate language knowledge and develop language skills, but also consciously cultivate students' confidence in learning foreign languages on this basis. According to the results from this study, guidelines for enhancing self-confidence of foreign students composes of four units; namely, unit1, What a successful international student needs to be able to do! ; unit2,Confidence is standard for international students; unit 3,How can international students become more confident and successful? unit 4,Ways for international students to become more independent and confident. All

the four units evaluated by the three specialists (One Thai professors and two English native speakers) in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.66 to 1.0 meaning the Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University for teacher was acceptable and could be used as an Guidelines for the enhancement of self-confidence for foreign students in Tsinghua University to enhance their self-confidence and competence. The contents of all practices encouraging learners to study well. And the learners must be able to apply the knowledge obtained from the exercises to the real situations. This is correspondent with Aaron S Blicblau. (2018) This helps the learners practice and develop their intelligence and competency in Art Program. For students, to participate in Self-confidence teaching, they must learn to adjust their mentality, understand that teaching is not a holiday, and must adapt to the home learning environment; at the same time, parents should also provide certain supervision and guidance within their capabilities.

## **7. Recommendations for Further Study**

1) Aresearch on the evaluation towards for effectiveness for the handbook in the contexts for the self-confidence teachers in Tsinghua University must be executed.

2) It is also of great practical significance and value to closely integrate self-confidence training with current university quality education, cultivation education of sound personality, as well as psychological health education and talent education for college students.

## **8. Acknowledgement**

Firstly, I would deeply appreciate my major thesis advisor Dr. Kris Phattaraphakin and my co-advisor Dr. Araya Ariya, for their professional guidance, and inspiration. Their extensive professional knowledge, rigorous attitude to learning, excellent working style, high morality of teaching, strict discipline and generosity to others have had a profound impact on me, which greatly supported me during the process of conducting and writing this thesis. Secondly, I am grateful to all the independent study defense committee, including Dr. Kris Phattaraphakin, Dr. Araya Ariya, and Dr Bandit Butsaba. Their meticulous approach to work and study has always been a role model for me, and their kind teaching and unconventional thinking has been an inspiration to me. I especially thanks, who has always been taught patiently and systematically me a great deal about educational research which enables me to make progress in it. Lastly, I would like to thank to all the research proposal defense committee, to thank our principal Dr. Kris Phattaraphakin for providing me with this wonderful place to study, I have been given selfless help and enthusiastic care in my studies, in my life and in my work.

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**Factors Affecting College Work Performance in S College,  
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**ABSTRACT**

The purpose of this study was to explore the impact of four dimensions of psychological contracts including the transaction contract, the interpersonal contract, the training contract and the management contract on the college counselors' job performances consisted of the task performance, the relationship performance, the innovation performance and the learning performance. The samples of this study were 110 college counselors working in a college in Hainan province, China. The research instruments consisted of questionnaires with validity and reliability, and the statistics used to analyze the data were multiple linear regression (MLR).

The data were collected from 53 male counselors (48.16%) and 57 female counselors (51.82%). The research results showed that all the four dimensions of psychological contracts had a significant impact on the college counselors' job performances as follows: the task performance [ $F=18.15, p < .001$ ], the relationship performance [ $F=7.07, p < .001$ ], the innovation performance [ $F=5.45, p < .001$ ] and the learning performance [ $F=2.73, p < .001$ ].

**Keywords:** job performance, psychological contract, college counselor

**1. Introduction**

In 2018, the Leading Party Group of the Ministry of Education released the Guiding Outline of Mental Health Education for Students in Colleges and Universities, emphasizing the importance of prioritizing mental health education for college students. Currently, Chinese colleges and universities are tasked with providing academic guidance, mental health education, career planning guidance, employment guidance services, dormitory management, student financial aid management, crisis management, safety education, health services, and more. As full-time counselors, we are required to possess high work efficiency to effectively manage the diverse

responsibilities involved in our work. Therefore, studying the work performance of college counselors is crucial to improving student management, enhancing the quality of college students, and maintaining stability in colleges and universities. In our country, many modern colleges and universities recognize the significance of establishing and implementing rules and regulations for effective management. However, there is often limited attention given to addressing the genuine psychological needs of front-line full-time counselors. The focus tends to be more on regulating the work of management personnel through systemic measures. (Yang Hongxia, 2009). During weekdays, counselors are occupied with complex daily tasks, leaving little time for contemplation and innovation. The emphasis is often on avoiding mistakes rather than recognizing achievements, which hinders counselors from expressing their personal ideas and personalities, and experiencing the satisfaction of innovation and self-realization. While different colleges and universities in China have varying expectations for front-line full-time counselors, they share common challenges such as long working hours, heavy workload, vague job descriptions, lack of clear identity, and low material compensation. (Miao Na, Li Jie, 2021). Furthermore, while many universities have high expectations for counselors, they often neglect to provide them with adequate professional training. This lack of training makes it challenging to assess and measure counselors' achievements, leading to limited prospects for their career development. In summary, college counselors face significant challenges, including difficulties in controlling processes and measuring work quality. These challenges can have negative psychological impacts on counselors, ultimately impacting the quality of college student management. It is clear that traditional economic contract management methods are insufficient to ensure effective and scientific counselor management, let alone improve their work performance.

S College, founded in 2005, is located in Sanya, Hainan Province, and is funded by Geely Holding Group, one of the world's top 500 enterprises. It is known as the fastest-growing and most competitive comprehensive private university in China. The college has a strong track record of producing successful graduates, with an average employment rate of over 95% and being recognized for their contributions to the free trade port. The construction of student work at S College holds significant strategic importance in serving national strategies. (Sanya University, 2015)

Given the background information, it is reasonable to assume that the relationship between colleges and counselors involves a psychological understanding beyond the formal management content stipulated in the contract. Counselors expect to work in a positive environment, receive professional training and further study opportunities, while universities aim to create a platform for personal creativity and provide smooth channels for career development. This study aims to conduct an empirical investigation of college counselors' work performance from the perspective of the psychological contract, based on the characteristics of counselors and previous research on college counselors' management and psychological contracts.

## 2. Research Objective

(1) to analyze and evaluate the work performance of college counselors at S College in Hainan Province, China

(2) to investigate the factors that influence the work performance of student counselors at S College in Hainan Province, China.

(3) to provide management recommendations that are suitable for S College in Hainan Province, China

## 3. Hypotheses

Hypothesis 1: the transaction contract of college counselors will significantly affect to work performance.

Hypothesis 2: the training contract of college counselors will significantly affect to work performance.

Hypothesis 3: the interpersonal contract of college counselors will significantly affect to work performance.

Hypothesis 4: the management contract of college counselors will significantly affect to work performance.

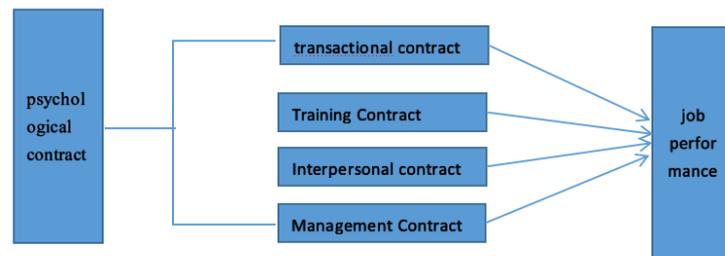


Figure 1.1 the research framework

## 4. Research Methodology

### 4.1 Population and Sample

This research is centered around the work of 110 university counselors at S College, Hainan province, China which has a total of over 1300 faculty members.

### 4.2 Research Instrument

The psychological contract scale for college counselors used in this study is based on the research of Chen Jiazhou, Ling Wenquan, et al. (2003) and Xu Xuexia's Psychological Contract Scale for College Teachers (2011). The scale utilizes a Likert scale format with scores ranging from 1 to 5, where 5 indicates strong agreement and 1 indicates strong disagreement. Higher scores on the counselor's psychological contract scale indicate a higher level of psychological contract fulfillment. psychological contract included 4 part ; transaction contract, training contract, interpersonal contract and management contract. Moreover, the work performance scale for college counselors, developed in this study, is based on the research of domestic scholars such as Wang Yanfei (2002). It is designed to capture the unique characteristics of college counselors' work performance. The scale also utilizes

a Likert five-level scale as the measurement standard. A higher score on each factor of the work performance scale indicates a higher level of work performance for the counselor. The work performance included task performance, relationship performance, innovative performance and learning performance.

#### **4.3 Data Collection**

In this study, with college counselors from S College as the research object, a total of 110 questionnaires were distributed, and 110 questionnaires were successfully recovered, among which 110 were valid, and the proportion reached 100%. Reliability refers to the consistency and stability of the results obtained by the test scale tool. If the reliability is larger, the smaller the standard error of the measurement is. Common methods for reliability testing include the Alpha coefficient, which has a value less than 1 and greater than 0. Generally, if the Alpha coefficient is 0.7, it is expressed as a lower boundary value, and the result has certain consistency and stability; at 0.7-0.8, the result is relatively high ideal; at 0.8-0.9, it is very ideal; if the coefficient is less than 0.65, the result can be abandoned.

#### **4.4 Data Analysis**

Descriptive analysis was conducted to examine basic information such as frequency, percentage, mean, and standard deviation. For hypothesis testing, multiple regression analysis was used to assess the impact of the independent variables on the dependent variable. The statistical analysis considered a significance level of p-value 0.05.

### **5. Research Findings**

#### **5.1 The analysis of Demographic data**

The result showed 53 were male, accounting for 48.16%, while 57 were female, accounting for 51.82%. This gender distribution is consistent with the current male-to-female ratio of college counselors. The majority of surveyed counselors fell within the age range of 26-35 years old, with a total of 69 respondents, accounting for 62.73% of the total number surveyed. This is because the current threshold for college counselors is mainly concentrated on master's students or above. Respondents aged 36-45 and 25 and below accounted for 18.18% and 19.09% of the total number surveyed, respectively. In terms of education, the surveyed counselors mostly held a bachelor's degree or below (53.64%) and a master's degree (36.36%). Some counselors pursued higher academic degrees during their employment, with 8.18% pursuing a doctorate degree. Regarding salary level, about 40.91% of surveyed counselors earned between 40001-60000 yuan per month, while only 10 counselors earned more than 10,000 yuan per month. The majority of students led by the surveyed counselors were in junior college and undergraduate freshman years, accounting for 73.64% of the total number. In terms of work experience, only 18 respondents had more than 8 years of tutoring experience, accounting for 16.36% of the total number surveyed. Most respondents had less than 4 years of tutoring experience, indicating that the surveyed population was mainly composed of new counselors.

## 5.2 The analysis of Correlation analysis

Table 1 correlation analysis

	BPC	TPC	RPC	MPC
TP	.314**	.333**	.337**	.292**
RP	0.087	0.03	.406**	.197*
IP	-0.053	-0.177	0.174	.328**
LP	0.260**	0.061	0.095	0.117

It is concluded from Table 1 that there are both significant and non-significant relationships between each dimension of the psychological contract of college counselors and each dimension of work performance. Among them, each dimension of psychological contract and task performance (TP), which were significant at the .01 level, but the correlation coefficient was around 0.3. In addition, in the psychological contract dimension, interpersonal contract (RPC) and management contract (MPC) have a significant positive correlation between relationship performance (RP), but the positive correlation between transaction contract and training contract is not significant. Additionally, only the management contract is currently considerably favorably connected with innovative performance in the job performance dimension, whereas there is no significant correlation in the other psychological contract aspects. Only the transaction contract (BPC) demonstrated a substantial positive connection with learning performance (LP), and it was significant at the 0.1 level.

## 5.3 Regression analysis

The results of the regression analysis for the task performance of college counselors, which includes the transaction contract, interpersonal contract, training contract, and management contract dimensions of the psychological contract ( $F=18.146, P<0.001$ ). The regression equation shows a significant degree of fit, with an  $R^2$  value of 0.409. In the above regression equation, the standardized regression coefficients for the transaction contract, interpersonal contract, training contract, and management contract of college counselors are all significant at the 0.1% level. This indicates that the task performance of college counselors is influenced by all four dimensions of their psychological contract. Furthermore, it suggests that the psychological expectations and states of college counselors at all levels can impact their job performance and lead to specific outcomes.

The results of the regression analysis for the relationship performance of college counselors, considering the transaction contract, interpersonal contract, training contract, and management contract dimensions of the psychological contract ( $F=7.067, P<0.001$ ). The regression equation is statistically significant. However, the degree of fit of the regression equation, as indicated by  $R^2=0.212$ , is relatively low. In the above regression equations, the standardized regression coefficients for the relationship performance of college counselors, influenced by the interpersonal contract and management contract, were found to be significant at the levels of

0.1% and 1%, respectively. This suggests that the counselors' psychological expectations regarding the working atmosphere and their perceptions of work management style directly impact their effectiveness in maintaining interpersonal relationships. However, the regression coefficients for the transaction contract and training contract on relationship performance were not found to be significant.

The results of the regression analysis for the innovation performance of college counselors, considering the transaction contract, interpersonal contract, training contract, and management contract dimensions of the psychological contract ( $F=5.452$ ,  $P<0.001$ ). The regression equation is statistically significant. However, the degree of fit of the regression equation, as indicated by  $R^2=0.172$ , is relatively low, indicating that the regression simulation for innovation performance of the four dimensions of the psychological contract is not very accurate. In the above regression equations, the standardized regression coefficients for the training contract, interpersonal contract, and management contract on the innovation performance of college counselors are significant. Among them, the relationship between the interpersonal contract and management contract with innovation performance is positive, indicating that they promote innovation performance. However, the training contract has a negative impact on innovation performance, which is slightly different from our everyday understanding. Further in-depth analysis suggests that this phenomenon may be related to the work characteristics of counselors. As a large number of students work through relevant training, with corresponding management norms and operational rules, and need to go through a large number of continuous training courses, excessive training may limit counselors' work in innovation. Additionally, the regression results for the transaction contract on innovation performance were not found to be significant.

The results of the regression analysis for the innovative performance of college counselors, considering the transaction contract, interpersonal contract, training contract, and management contract dimensions of the psychological contract ( $F=2.729$ ,  $P<0.05$ ). The regression equation is statistically significant. In the above regression equation, the standardized regression coefficients for the training contract, interpersonal contract, and management contract on the learning performance of college counselors are all non-significant but show a positive correlation. However, the regression coefficient for the transaction contract on learning performance is significant at the 1% level, indicating a positive promotion effect of the transaction contract on learning performance. Further analysis suggests that satisfying material guarantees, such as salaries for college counselors, can deepen their effectiveness in learning new fields and knowledge. Material security can promote the provision of learning performance.

## **6. Discussion**

This study examines the relationship between the psychological contract and job performance of college counselors, specifically focusing on the dimensions of the psychological contract that comprise the counselors' expectations. The findings are as follows;

Firstly, when the transaction contract of college counselors is satisfied, it significantly improves their task performance. This finding supports the hypothesis of the study, indicating that the satisfaction of material security

has a positive impact on work task completion. College counselors, being high-level knowledge-based professionals, have higher demands compared to ordinary employees. According to Maslow's hierarchy of needs theory, material security is a fundamental requirement that must be fulfilled to meet their basic physiological needs. By satisfying the responsibility of material security, counselors are able to wholeheartedly engage in their work, leading to improved task performance in their overall work performance. Secondly, when the transaction contract of college counselors is satisfied, it significantly improves their learning performance. Meeting the material guarantee responsibility dimension of college counselors' needs enhances their work enthusiasm, leading to active learning and the acquisition of new knowledge and skills. This finding supports the hypothesis of the study.

Thirdly, meeting the needs of college counselors through vocational training is beneficial for improving their task performance. Vocational training helps counselors enhance their skills, thereby promoting the successful completion of their work tasks.

Fourthly, meeting the interpersonal contract needs of college counselors improves their task performance, innovation performance, and relationship performance in work. A healthy and positive working environment, where colleagues have good relationships and engage in sincere communication and information exchange, contributes not only to task completion but also to taking on work tasks actively. Without a harmonious environment between counselors, it becomes challenging to achieve ideal work performance. This finding aligns with the hypothesis of the study. Lastly, meeting the management contract needs of college counselors improves their task performance, innovation performance, and relationship performance in work. An appropriate management system process helps counselors adapt to their job and work diligently. If universities provide counselors with challenging work, involve them in decision-making processes, listen to their voices, and allow them to fully express their self-value, it will greatly enhance counselors' efforts and improve their innovation performance in their work performance. This finding supports the hypothesis of the study..

## **7. Suggestion**

(1) Countermeasures and Suggestions to improve the work performance of college counselors and strengthen interpersonal support and pay attention to creating a working environment.

(2) Create a harmonious working environment and cultivate the sense of community of counselors and establish a salary and reward system with great humanistic care.

(3) Precise positioning platform and establish a systematic learning plan and carry out vocational training to promote the multi-habitat development of counselors

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## **The Development of Training Course Based on Orff Music Teaching Theory to Improve Musical Rhythm Skill of Undergraduate Students**

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### **ABSTRACT**

The objectives of this research were 1) to develop of training course based on Orff music teaching theory to improve musical rhythm skill of undergraduate students.2) to compare students' musical rhythm skill before and after the implementation base on Orff music teaching theory, The sample group included 30 first-year students majoring in music education from City College , in the first semester of the academic year 2023, those who obtained through cluster random sampling cluster random sampling method. The research instruments included 1) training course and curriculum activity plans based on Orff music teaching theory and 2) musical rhythm skill measurement form. Data were statistically analyzed by mean, standard deviation, and t- test for dependent samples. The results were found that:

1) Development training course based on Orff music teaching theory for undergraduate students, Training courses include: module 1 theoretical knowledge., module 2 physical training and module 3 musical instrument. training course in total have 12 hours. it was found that students' musical rhythm skill has been improved, students can more accurately grasp the rhythm elements in the music, remember and master a variety of complex rhythm types faster, and better understand the emotion and expression in the music

2) Using training course based on Orff music teaching theory, the musical rhythm skill of students after class is significantly higher than before class, with statistical significance at level .01.

**Keywords:** Training course, Orff music teaching theory, Music rhythm skill,

## 1. Introduction

Orff music teaching theory is a music education theory proposed by Carl Orff, the German music educator, at the beginning of the 20th century. (Zhou, 2020) This theory advocates the combination of music education with children's life, learning and creation, and cultivating children's musical ability and artistic beauty through games and collective creation. The theory of Orff music teaching is an innovation and attempt of the traditional music education mode. He believes that traditional music education puts too much emphasis on the teaching of skills and professional knowledge, and ignores children's subjectivity and creativity, which makes them lose interest and love for music. Therefore, Orff proposed a model of music education that is close to the nature of children, aiming to stimulate children's musical potential and creativity.

In this study, we use Orff music teaching theory as the research framework, which includes different aspects of cognition, behavior and emotion. Under this theoretical framework, we seek to develop short-term training courses, improve the existing music training mode, and improve students' sense of music rhythm. This article sorts out the theoretical knowledge of Orff music teaching theory, (Fang, 2016) tries to effectively improve students' sense of music rhythm from multiple perspectives. It is hoped that by using Orff music teaching theory to develop training courses, students' sense of music rhythm can be improved. The specific content includes: 1) The introduction and analysis of the Orff music teaching method, analyze the influence mechanism of Orff music teaching on music rhythm skills. 2) Design and implementation of courses based on the Orff music teaching method to cultivate students' ability to rhythm and skills. 3) Through questionnaire surveys and experimental research, the influence of courses based on the Orff music teaching method on students' music rhythm skills, explore the application value of Orff music teaching method in terms of music rhythm skills. 4) Through data analysis and comparison, summarize the improvement of courses based on the Orff music teaching method on the improvement of children's music rhythm skills, put forward suggestions for further improvement and improvement, and provide reference opinions for the development of music education.

In summary, there are some problems and challenges in the application of Orff music teaching theory both at home and abroad. Through study design and empirical analysis, this study aims to improve college students through the development of training courses, and provide a new idea and method to solve the existing problems. At the same time, the study also explores the influence of Orff music teaching theory on the teaching model, and the research limitations and challenges, and proposed corresponding coping strategies. At the same time, the results of this study also provide some enlightenment and prospects for the future related research.

## 2. Research Objective

1. To develop of training course based on Orff music teaching theory to improve musical rhythm skills of undergraduate students.
2. To compare students' musical rhythm skill before and after training course based on Orff music teaching theory

### **3. Literature Review**

#### **3.1 The Development Training Course**

Developing a training course usually refers to a series of training activities designed and implemented to meet specific work or learning needs, training course development means recreating or improving existing courses. To conform to a changing society. The learning experience is planned and developed to guide the Teaching and Learning (Kasama, 2009), in order to develop a curriculum, the basics should be studied. Prepare a draft course. Implementing the curriculum (Klaharn, 2018), evaluating the curriculum (Li, 2002), and improving it to ensure completeness and efficiency.

#### **3.2 Orff music teaching theory**

"Orff music teaching method" was created by Orff, a famous musician in the Federal Republic of Germany, the Orff music teaching method has been widely used in many schools. The reason is that the Orff music teaching method pays more attention to students' perception, understanding, interpretation ability and imagination of music. (Li, 2021) pointed out that: by applying Orff music teaching method to music rhythm teaching, the students' music rhythm can be cultivated through the training of musical instruments such as triangle iron, double ring ring, bell string and tambourine, and realize teaching and entertainment through the teaching method of gamification; (Yuan, 2019) point out among the world's music education systems, the Orff music education system is one of the most mature systems. It emphasizes the original music education and advocates learning and experiencing music naturally and instinctively.

#### **3.3 Training course based on Orff music teaching theory**

Designed to provide music educators with the necessary skills and knowledge to effectively teach music using the Orff approach. The course typically includes hands-on training in the use of percussion instruments, vocal techniques, movement, and dance, as well as instruction in Orff philosophy and curriculum development. The Orff approach emphasizes active participation, improvisation, and the use of rhythm, melody, and movement to help students develop their musical skills. Through the training course, music educators can learn how to incorporate these principles into their teaching, and provide a dynamic and engaging music education experience for their students. IN addition to developing practical skills, the Orff Music Pedagogy Development Training Course also provides opportunities for participants to explore the theoretical and philosophical underpinnings of Orff. This can help educators develop a deeper understanding of the approach, and its potential to enrich the lives of their students.

Step 1: Introduction, the introduction stage is the first part of the course at the beginning of the course. The purpose is to attract students' attention and attract students' interest. Teachers can import them by songs, games, stories, etc., allowing students to enter the music world and create a good learning atmosphere. The introduction process should make full use of the students' interests and imagination, so that students can feel the fun and beauty of music.

Step 2: Lecture, this stage is an important part of the Orff music teaching method. The main purpose is to teach students music knowledge and skills. During the explanation stage, teachers can introduce the basic

knowledge and performance skills of music to students through singing, jumping, and playing, so that students can understand and master the nature and laws of music. The explanation link should pay attention to explaining the levels and organized ways, so that students can gradually master music knowledge and skills.

Step 3: Practical exercises, practice exercises are an important part of the Orff music teaching method. The main purpose is to allow students to master music skills and performance skills in practice. In the practice practice, teachers will guide students to perform practical activities such as dancing, percussion, chorus, etc., so that students can feel the fun of music in a variety of music practice, understand and master the skills and performance skills of music. The practical session should pay attention to inspiring students' thinking and guide students to create and perform independently.

Step 4: Summary, the summary stage is the last part of the course at the end of the course. The purpose is to allow students to reflect on the content of learning and consolidate the music knowledge and skills they have learned. Teachers can summarize the content of the whole lesson, ask questions, and allow students to discuss group discussions to allow students to summarize the content learned, consolidate and deepen the knowledge and skills they have learned, and lay the foundation for the next study. In summary, we must pay attention to the growth of students and encourage students to gradually improve their artistic expression ability.

### 3.4 Musical Rhythm Skill

In music teaching, rhythm is an important element of music. No matter at home or abroad, rhythm teaching is an important part of music teaching. It plays a decisive role in the cultivation of students' imagination, aesthetic ability, innovation consciousness and innovation ability. After consulting relevant literature, (Huang, 2020)Some experts believe that the rhythm is the soul of music. Music organizes monotonous melody sounds with ups and downs through rhythm, which arouses human resonance and thus produces emotional resonance. Rhythm training in music can enhance people's musical imagination and creativity. Musical rhythm skills means through knowledge and practice to understand, perceive, express and master rhythm in music. Rhythm is the organization of time and duration in music, usually through a series of regular strong and weak beats and note duration. This skill involves the perception, memorization and performance of musical rhythms, making musical performances more accurate and expressive

### 3.5 Research Framework

The development of training course based on Orff music teaching theory to improve musical rhythm skill of first year students of undergraduate students. The research concept framework is as follows:

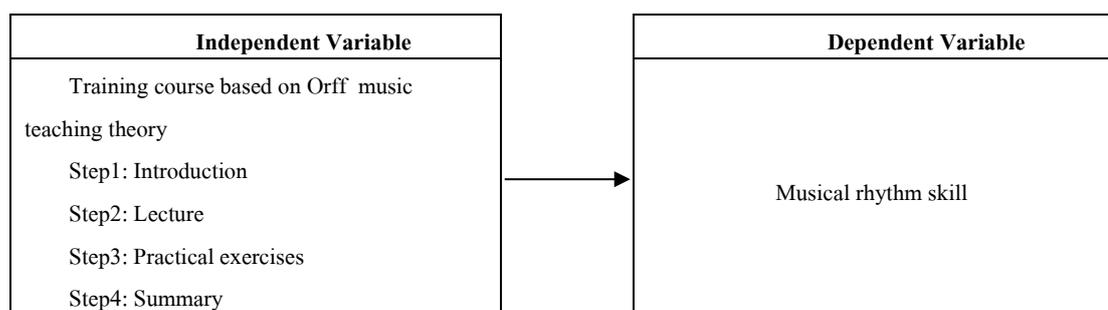


Figure 1 Research Framework

### 3.6 Research Hypotheses

After the training course based on Orff music teaching theory, the students' musical rhythm skill has been improved explicitly.

(Mohamad, 2016). This study aim of this study is to examine the application of Carl Orff technique in “Rhythm in Words” strategy to enhance pupils’ music note reading skill in a Malaysian primary school in Raub, Pahang. The sample of this study is 17 pupils of Year 4 pupils aged of ten consist of 10 boys and 7 girls. However, only 10 pupils were selected for final test, Findings show that the sample showed improvement after the two music lessons. (Liao, 2014). in the book "Orff Music Education Thought and Practice" introduced in detail the development and implementation of Orff music education theory. Orff theory of music education is a method of music education with rhythm and rhythm as the core, which emphasizes the trainees to explore and explore musical elements through games and interaction, so as to improve their musical skills and expression. This study concludes that by implementing the Orff music teaching theory on students, their musical rhythm skill after class is significantly higher than that before class. This is consistent with the research hypothesis.

## 4. Research Methodology

### 4.1 Research Design

The development of training course based on Orff music teaching theory to improve musical rhythm skill of undergraduate students. the methodology of this research and development. This research is experimental research. One group Pretest – Posttest design was used with the following experimental design:

Table 1. Experimental design.

Group	Pretest	Experimental	Posttest
R	O <sub>1</sub>	X	O <sub>2</sub>

The meaning of the symbols used in the experimental design.

R	means	Random Sampling
X	means	experimental
O <sub>1</sub>	means	Pretest
O <sub>2</sub>	means	Post-test

### 4.2 Population and Sample

#### 4.2.1 Population

The population of this research was 90 first-year students majoring in music education in City College, with 3 classes and 30 students in each class.

#### **4.2.2 The Sample Group**

The sample group of this research was 30 First-year students from Class 1, majoring in music education in the first semester of the academic year 2023 of City College, through the cluster random sampling from 1 class, each class has student's mixed ability, high level, medium level and low-level abilities.

#### **4.2.3 Research Instrument**

The development of training course based on Orff music teaching theory to improve musical rhythm skill of undergraduate students .The research Instruments is as follows:

##### **4.2.3.1 Training course activity plans based on Orff music teaching theory**

1) Learn about Orff music teaching theory, based on objectives, content, measurement and evaluation guidelines, and develop a curriculum training plan for teacher behavior

2) On the basis of learning the theoretical knowledge, set the training objectives, training content and training time

3) Learn relevant concepts and theories through literature, library materials and other methods, and make training plans

4) The researchers formulated curriculum activity plans using the Orff music teaching theory, and selected 3 modules of theoretical knowledge, physical training and musical instrument training.

A total of 12 hours. Each curriculum activity plan specifies themes in detail according to the Orff music theory:

1) content, 2) explanation, 3) objective of learning, 4) Curriculum training Activity, 5) Instructional Media 6) Evaluation method, 7) Assessment tool

5) Submit the completed curriculum activity plans to the tutor, check the consistency and applicability of the content, and make modifications according to the tutor's suggestion.

6) Submit the revised curriculum activity plans to 3 experts for review to verify the accuracy and applicability of teaching content, the consistency of learning objectives, content, learning activities, teaching media, and measurement and evaluation. Find the IOC congruence index (Index of Item Objective Congruence). The consistency indicator of each evaluation content is greater than or equal to 0.5 and it's considered suitable for research. The ICO value for each question in this evaluation criteria is 1.00.

##### **4.2.3.2 musical rhythm skill measurement form.**

1) Analyze the content of musical rhythm skill consistent with the curriculum activity plans.  
2) Learn theories and methods of musical rhythm skill assessment from the literature and relevant research.

3) According to the definition and dimensions of musical rhythm skill, and referring to the musical rhythm skill evaluation instruments of previous researchers, the musical rhythm skill evaluation standard is designed. The scoring criteria and corresponding scores have been established for all 10 evaluation points: 1 point, 2 points, and 3 points. The full score is 30 points. Different scores represent varying degrees of self-directed learning ability. 27-30 points represent strong; 23-26 points represent relatively strong; 18-22 points represent general; 14-17 points represent relatively weak; 10-13 points represent weak

4) The consistency indicator of each evaluation content is greater than or equal to 0.5 and it's considered suitable for research. The ICO value for each question in this evaluation criteria is 1.00. Check the reliability of measurement standard using Cronbach's  $\alpha$  Coefficient=0.92, which can be used for research.

#### **4.2.4 Data Collection**

1. Invite 3 relevant professional scholars and experts, issue official documents of Bansomdejchaopraya Rajabhat University professional scholars and experts, and provide information on research content and research tools: curriculum activity plans and musical rhythm skill scoring criteria for consideration of the goal alignment index: IOC. Collect IOC inspection data from 3 professional academic experts.

2. This study is an experimental study. According to the research tools developed by the researchers, scores were carried out before and after the experiment, and evaluation data were collected.

#### **4.2.5 Data Analysis**

1. Analyzed and verified the effectiveness of the Training course and curriculum activity plans based on Orff music teaching theory And musical rhythm skill measurement form scoring criteria, taking the consistency index as the consideration standard (Index of Item Objective Consistency: IOC).

2. Analyze basic student information by finding hundreds and percentages, including analyzed musical rhythm skill of students before and after the implementation of the experiment was scored. Using the data obtained from the experiment to analyze the statistical data through the mean value, standard deviation and t-test for dependent samples.

### **5. Research Findings**

This research conducted an experimental study on 30 first-year students in Yunnan Communication Vocational and Technical College, including 25 females (83.33%) and 5 males (16.67%). According to the research topic, the summary of the research on improving college students' musical rhythm skill through the Orff music teaching theory is as follows:

1) Development training course based on Orff music teaching theory for undergraduate students, Training courses include: module 1 theoretical knowledge., module 2 physical training and module 3 musical instrument. training course in total have 12 hours. it was found that students' musical rhythm skill has been improved, students can more accurately grasp the rhythm elements in the music, remember and master a variety of complex rhythm types faster, and better understand the emotion and expression in the music

2) the researcher analyzed the data and used mean, standard deviation, and t-test dependent to analyze the scores of students' musical rhythm skill before and after class. The data analysis results are shown in Table

Table 1. The comparison of students' musical rhythm skill before and after the implementation training course based on Orff music teaching theory

musical rhythm skill	n	full scores	$\bar{X}$	SD.	t	p
<b>Before class</b>	30	30	14.47	3.01	34.51**	.000
<b>After class</b>	30	30	23.93	3.27		

\*\* Statistically significant at level. 01 ( $p < .01$ )

Table 1 Subsequently, the researchers analyzed the students' musical rhythm skill before and after class using the Orff Music Teaching theory, by implementing the Orff music teaching theory, the scores of musical rhythm skill before and after class for first-year students are 14.47 points on average before class, 23.93 points after class, and the difference in average scores is 9.47 points, indicating that the scores after class are higher than before class. Shows that the average score of first-year students' musical rhythm skill after class is higher than the average score before class, indicating that students' musical rhythm skill after class is higher than before class.  $P < .01$  indicates statistical significance at the .01 level. By implementing the Orff music teaching theory on students, their musical rhythm skill after class is significantly higher than that before class. This is consistent with the research hypothesis.

## 6. Discussion

The aim of this study is to enable first-year college students to improve their musical rhythm skills through the Orff music teaching theory (Ye, 2018) practical research shows: the core idea of Orff music teaching method is to respect and cultivate the musical potential of every student, so that they can learn and explore music in personal experience. In the training course, students are encouraged to express and create freely, which not only improves their musical skills, but also develops their innovative thinking and teamwork skills. (Zhang, 2018) The comprehensive characteristics of Orff music teaching method have also been fully reflected in the training course. By combining various elements such as movement, language and dance, the training course not only cultivates students' sense of rhythm and musical skills, but also comprehensively improves their artistic literacy and humanistic knowledge, and also focuses on cultivating students' emotional experience of music. In the training course, students not only learn music knowledge, but also express their feelings and thoughts through performance and creation, so as to cultivate their aesthetic ability and emotional expression ability. (Hui, 2021) In the training course, students can be exposed to music in different fields and styles, and improve their music appreciation ability and cultural literacy by comparing and analyzing the characteristics of different music. At the same time, this teaching method also emphasizes the interdisciplinary integration of learning, which helps to cultivate students' comprehensive quality and future development potential.

The conclusions of this study are consistent with those of (Wang, 2020) conducted a survey on the current teaching situation in universities and found that In the music teaching of colleges and universities in my

country, the implementation of Orff teaching can enable students to learn complex teaching content as soon as possible when learning music. Students can arrange some simple rhythm games in the early stage of learning, so that students can easily accept it. Familiar with the rhythm problem, the teacher can do some comprehensive exercises, practice different rhythms, and also add some simple performance movements. With the deepening of this part, you can also add some musical instruments. Through this step-by-step process, students can easily master such complex learning content, which is also conducive to students' understanding of music theory, and at the same time increases students' interest in learning.

## **7. Suggestion**

1. Orff music teaching theory has a higher standard for teachers' teaching, which can be considered as a combination of opportunities and challenges. Teachers need to have solid music knowledge and teaching skills to be able to effectively teach the relevant knowledge and skills of music rhythm. We also need to pay attention to the role change in the training course, no longer a simple transmitter, but pay more attention to the guide and motivator who guide students to study independently. In the training course, teachers should take students' needs and interests as the starting point, and flexibly use different teaching methods and means to stimulate students' enthusiasm and initiative in learning.

2. Practical research shows that the teaching of rhythm is very necessary for junior middle school music classroom, and improving students' sense of music rhythm can play a good role in creating an efficient classroom. Future research can further deepen the implementation effect of the training curriculum, the improvement of the teaching mode, and the correlation research of Orff music teaching theory, so as to promote the development of music education.

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## **Development of The National Education Management Information System Guidelines for The Higher Vocational Colleges in Guangdong Province**

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### **ABSTRACT**

This research was a mixed method. the objectives were to investigate the current situation and to study the guidelines for developing the national model of educational management information system of the higher vocational colleges in Guangdong province, the sample group was 326 students used by random sampling, moreover 3 specialists for interviews. The instruments were questionnaires and semi-constructed interviews form. Data analysis for quantitative research using statistics utilized in this research were frequency percentage, mean and standard deviation and data analysis for qualitative research was content analysis.

The result of this research showed that: 1. the overall current situation of educational management information system in the light vocational college in Guangdong province was high level. 2. The guideline for development were as follows: (a) used centered design, put user experience in the first place, customize system functions and interface according to the needs of different user roles, and provide multi-functional modules and initiative user interface. (b) data quality control, strengthen data validation and input control, improvement standardized data entry format, automate data import and provide data erasing and validation function.(c) process automation, introducing automated approval and reminder mechanisms to realize efficient operation of processes and strengthening real time data monitoring to deal with abnormal situation in a timely manner. (d) Student satisfaction, provide training on system usage, encourage student participate in system design and improvement, and optimize the users interface and interactive process to enhance student satisfaction

**Keywords:** National educational management information system, Higher vocational colleges,  
Guidelines for development

## 1. Introduction

With the application and popularization of education management information systems in all aspects of social life, it has brought many unexpected conveniences and shortcuts to our lives. It can improve management efficiency, provide support for the decision-making of countries and entrepreneurs, and create tangible and intangible value for many business groups and government departments. Therefore, the establishment of an education management information system not only facilitates students, teachers and administrators to learn, educate, manage and serve the public, but also contributes to the unified and efficient management of various colleges and national education departments, and provides education reform through the analysis of education information data. Solid foundation. (Jiang, 2013, p. 76)

This paper puts forward the following two specific objectives:

(1) To investigate the current situation of educational management information system in the higher vocational colleges in Guangdong Province.

(2) To study the guidelines for developing the national model of educational management information system of the higher vocational colleges in Guangdong province, the sample group was 326 students used by four national model higher vocational colleges in Guangdong Province random sampling, moreover 3 specialists for interviews.

## 2. Research Objective

(1) To investigate the current situation of educational management information system in the higher vocational colleges in Guangdong Province.

(2) To study the guidelines for development the national model of educational management information system of the higher vocational colleges in Guangdong province.

## 3. Literature Review

Foreign scholars have conducted early research on educational informatization, but there are relatively few research results on the informatization of educational management in higher vocational colleges. Of course, many studies related to educational informatization have certain reference and promotion effects on promoting the development of educational informatization in colleges and universities. The academic community and governments of various countries are paying close attention to the research and practice of educational informatization. However, in China, research on educational informatization systems started late, mainly focusing on basic education and higher education. Research on vocational education still needs to be deepened. Current research mainly focuses on macro-information design issues and strategies, while there are relatively few studies on regional information design and management. Therefore, this study narrows the scope of the research, combines theory and practice, and focuses on the development of education management information systems in national model higher vocational colleges in Guangdong Province. ( He, 2017, p. 12)

### 3.1 Related Research

Chen (2012, p. 3) selected typical practical cases of the integration of the Internet and education, analyzed the essence of Internet plus education, and predicted its development trend, and then used it as an action guide to carry out educational practice. MOOCs focus on using "Internet + Education" to develop high-quality resources, Khan Academy provides public education resources for the public, and the case of flipped classroom is a specific form of information-based education.

Li (2016, p. 3) clarified the meaning and goal of "Internet +" in vocational education in her research, and put forward the waistline of "Internet + vocational education" on the basis of clarifying its main characteristics.

### 3.2 Research Framework

The construction of educational management information system in higher education institutions is mainly carried out and built from the aspects of educational management information system design, educational management system investment and educational management information system process management. Therefore, this paper will start from three aspects of education management information system design, education management information system invests, and education management information system process management to understand students' satisfaction with the construction of education management information system in higher education institutions. To study variables as the following.

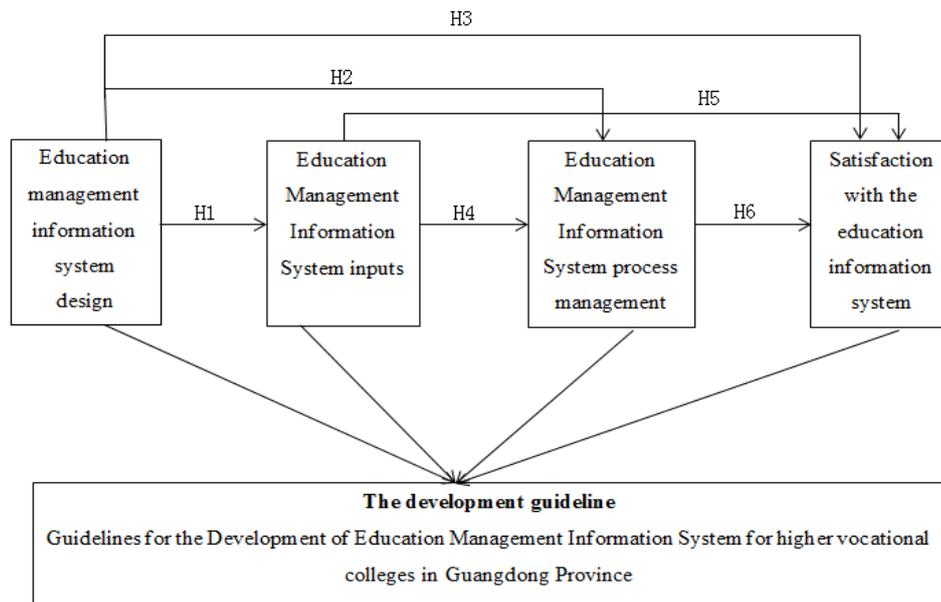


Figure 1 Research Framework

Note. Information Construction of Archives Management in Vocational colleges. (Hong, 2018, P. 302-303). Research on the Improvement of Office Information Management in Higher Vocational Colleges. (Li, 2018, P. 213)

### **3.2 Research Hypotheses**

The design of educational management information system has a positive impact on student satisfaction in practical teaching.

Educational management information system design has a positive effect on education management information system investment.

Investment in educational management information systems has a positive effect on student satisfaction with educational information systems.

The design of education management information system has a positive impact on the process management of education management information system.

Educational management information system process management has a positive impact on educational information system student satisfaction.

Educational management information system investment has a positive effect on educational management information system process management.

## **4. Research Methodology**

This research was a mixed method research.

1. Quantitative research adopts the questionnaire method to collect data, and the research method of directly obtaining relevant materials and analyzing these materials through field visits to objective situations. This paper investigates the current situation of the education management information system of four national model higher vocational colleges in Guangdong Province, analyzes and researches the specific situation of the construction of the education management information system, in order to find out the problems found in the process of the construction of education management informatization, and then puts forward the countermeasures for exploration and improvement. The target of the survey is 350 students in four national model higher vocational colleges.

2. Qualitative research color with the interview method, interviews help to study the problems of higher vocational colleges in the construction of education management information system, can be through the management information system experienced teachers interviews, according to the low score of the student's problem to analyze, so as to give to the education management information system deficiencies in order to improve.

### **4.1 Research Design**

This research was a mixed method, according to objective 1, was a quantitative research and objective 2 was a quantitative research

### **4.2 Population and Sample**

This paper adopts the simple random sampling method, based on the actual situation of the development of education management information system in four model higher vocational colleges at the national level in

Guangdong Province, the research object is the students of four model higher vocational colleges at the national level in Guangdong Province, and the data collection is carried out through the questionnaire research method.

**Related Colleges Sampling Information**

Four national model higher vocational colleges	Number of students	sample
Guangzhou Panyu Vocational and Technical College	1200	78
Shenzhen Vocational and Technical College	1100	86
Guangzhou Civil Aviation Vocational and Technical College	1100	79
Guangdong Light Industry Vocational and Technical College	1000	83
<b>totals</b>	<b>4400</b>	<b>326</b>

**Population:** Students: 4400 in total, from four model higher vocational colleges in Guangdong province

**Sample:** 326 students (kwjcie & Morgan, 1970) used by stratified random sampling. Moreover 3 specialists for interviewers

A total of 350 students from four model higher vocational colleges in Guangdong Province received 326 valid questionnaires, with a validity rate of 93.1%, forming the sample data for this study.

**4.3 Research Instrument**

The research tools used in this study are questionnaires and interviews, and the steps for designing the research tools are as follows:

1. The target of the questionnaire survey is clarified according to the purpose of the research study.
2. The questionnaire composed according to the actual situation of the construction of education management information system in national model higher vocational colleges in Guangdong Province, these questions are designed on the basis of the framework of the construction of education management information system, there are two parts of questions in the questionnaire as follows:

Part I: Questions about students' personal information

Students can answer the questions about their basic personal information according to the list.

Part II: Questions about the four aspects of EMIS construction: design, input, process management and student satisfaction are rated and the respondents can answer the questions by choosing a number from a scale of 5 to 1. Each number represents the level of student's agreement.

- 5 = Highest level of use in current state
- 4 = High level of use in current state
- 3 = Moderate level of use for the current state
- 2 = Low level of use for the current state
- 1 = Lowest level of use for current state

The IOC of question value between 0.67-1.00, A total of 350 students from four model higher vocational colleges in Guangdong Province received 326 valid questionnaires, with a validity rate of 93.1%, forming the sample data for this study.

#### **4.4 Data Collection**

This study was a mixed methods approach. The research subjects were 326 randomly sampled students who were administered questionnaires and 3 experts were interviewed.

#### **4.5 Data Analysis**

The data analysis of the questionnaire consists of three sections as following:

Part 1: Analyze basic student information using descriptive statistics to determine frequency distributions and percentages.

Part 2: Estimate the established structural equation model and analyze the obtained factors and paths of influence on student satisfaction of EMIS in higher vocational colleges, and analyze the direct influence or direct effect of EMIS design, EMIS inputs, and EMIS process management on student satisfaction of EMIS. Find the mean and standard deviation. The criteria for defining the range of mean scores are as follows:

4.50-5.00 = highest level of satisfaction or need for satisfaction

3.50-4.49 = high level of satisfaction or need for satisfaction

2.50-3.49 = moderate level of satisfaction or need for satisfaction

1.50-2.49 = low level of satisfaction or need for satisfaction

Part III: Applying relevant analytical methods, using the interview method and literature analysis, optimization suggestions were made for the construction of education management information systems in higher education institutions.

## **5. Research Findings**

Education Management Information System Design:

Mean: Across the five questions, the average score ranges from 3.300 to 3.801.

Standard Deviation (SD): The standard deviation ranges from 0.672 to 1.024. This means that on some questions, the distribution of students' answers is relatively consistent.

Education management information system input:

Mean: Across the five questions, the average score ranges from 3.300 to 3.801.

Standard Deviation (SD): The standard deviation ranges from 0.672 to 1.024. This shows that students' answers have high consistency on some questions.

Education Management Information System Process Management:

Mean: Across the four questions, the average score ranges from 3.437 to 3.831.

Standard Deviation (SD): The standard deviation ranges from 0.864 to 0.927, showing the large differences in the distribution of students' responses to these questions.

Education Management Information System Student Satisfaction:

Mean: Across the four questions, the average score ranges from 3.257 to 3.776.

Standard Deviation (SD): The standard deviation ranges from 0.521 to 0.841, indicating that students' responses to these questions are relatively consistent.

The Results of Data Analysis According to Objective One

Variable Name	Mean ( $\bar{X}$ )	SD	Level
Education Management Information System Design	3.5038	0.900	high
Education management information system input	3.5018	0.866	high
Education Management Information System Process Management	3.5950	0.908	high
Education Management Information System Student Satisfaction	3.5090	0.681	high
Total	3.524	0.844	high

Overall, the findings indicate that students showed positive tendencies toward the design, input, process management, and overall satisfaction with educational management information systems. However, there is some potential room for improvement, especially in the area of process management, as the large standard deviations indicate large differences in students' perceptions of these issues.

According to the results of objective two, strengthening investment in student information management systems is a way to improve satisfaction and system construction. The study found three key variables: improvement of students' innovation and entrepreneurship capabilities, improvement of employment competitiveness, and update of on-campus education management information system laboratory equipment.

Guidance suggestions include priority management, external cooperation, resource integration, teacher training and student participation.

## 6. Discussion

Disadvantages:

Sample problem: Due to resource limitations, the sample distribution is uneven and the sample size needs to be expanded.

Research method issues: Longitudinal surveys are needed to delve deeper into the reasons for differences in relationships and student satisfaction.

System recommendations:

Design suggestions: User-centered, provide multi-functional and easy-to-use interface, adapt to mobile devices. (Ren & Lu, 2015, p. 36)

Input suggestions: Strengthen data validation and automatic import to ensure data quality.

Process management recommendations: Introduce automated approvals and reminders; consider data sharing and user needs.

Satisfaction recommendations: Provide training, encourage students to participate in design and improvement, and improve user interface and interaction.

Final recommendation: Continuously improve the system to ensure it is efficient, user-friendly and meets needs.

## 7. Suggestion

Demand analysis and planning: Understand the needs of higher vocational colleges and clarify system functions and benefits.

Modular design: Divide system modules to facilitate maintenance and expansion.

User-friendly interface: Design an easy-to-use interface to satisfy different users.

Data security and privacy: Take strict security measures to protect data.

Cloud storage and backup: Store data on the cloud and back it up regularly.

Multi-platform compatibility: ensures running on different devices

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## **A Survey of Job Categories and Industry Types Desired by Thai Students Majoring in Japanese Language: A Case Study of Sripatum University**

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### **ABSTRACT**

The purpose of this paper is to clarify the attitudes of Japanese major students enrolled in the Department of Japanese for Business Communication at Sripatum University regarding jobs and industries. The questionnaire asked 51 third-year students whether there were job/industry types that they decided on, whether there were desired job/industry types for employment after graduation, and whether there were desired jobs/industries for internship at company before graduation. The response results were processed using descriptive statistics, and data analysis and observations were conducted. According to the results of the survey (28 valid responses), 92.86% of the students answered that they had already decided on a job, and 85.72% of them answered that they had already decided on an industry including *to some extent*. It was found that 46.48% of students desired job titles related to *office workmanagement*, and 86.20% of them preferred *non-manufacturing industries*. In regards to internship at company prior to graduation, the answers were divided depending on whether or not they desired a particular type of job and industry. In any case, it is expected that an internship before graduation will be a starting point for career growth after graduation.

**Keywords:** job category, industry type, cooperative education, career education, Sripatum University

### **1. Introduction**

*Career education* at the Department of Japanese for Business Communication (hereinafter, referred to as JBC department), Sripatum University (hereinafter, referred to as SPU) incorporates *Industry-university cooperative education* as the curriculum of the JBC's major course. Two subjects, namely, *JBC498 Japanese for Business Communication Pre-Cooperative Education* (1 credit) and *JBC499 Japanese for Business Communication Cooperative Education* (6 credits) are arranged as subjects directly related to the core framework of *Cooperative Education*. The purpose of JBC498 course is for students to gain knowledge and deepen their understanding of *cooperative education*. In concrete terms, it is about 1) how to proceed with specific procedures in an internship program implemented through work experience at a company, 2) work contents of practical training during an internship period, and 3) evaluation activities for practical training outcomes after the completion of internship program. In JBC499 course, the students work as an intern at a company for about 4 months under a tripartite system of report: direct communication and consultation between internship students, supervisor in charge of receiving internship student at a company, and academic advisor at JBC department. It goes without saying that this course

provides an opportunity for students to gain work or professional experience that will maximize the outcomes of their internship. In addition, some courses related to *Industry-academia cooperative education*, such as *JBC229 Japanese Corporate Culture and Working Style*, *JBC321 Cross-Cultural Business Communication*, and *JBC332 Japanese for Management*, are arranged to understand how Japanese business people think about their work in line with the background of Japanese corporate culture and business customs. While it is meaningful to clarify the students' own motivation and purpose for participating in internship program, it is also important to consider the types of occupations and industries that the students of JBC department can play as an active role of *business Japanese human resources*. Moreover, it is also important to grasp the current situation of recruitment information for business Japanese personnel in Japanese companies in Thailand, and the actual conditions of companies in Thailand and Japan that require *business Japanese human resources*.

In the meantime, *career education* is defined as education that promotes *career development* by cultivating the abilities and attitudes necessary for social independence and occupational self-reliance in students (Ministry of Education, Culture, Sports, Science and Technology, 2011). The researcher conducted a survey on the students' own attitudes toward post-graduation occupations and industries in light of *industry-university cooperative education*, *career education*, and *business Japanese human resource development*. This paper is a report summarizing the analysis and observations results of the survey data. This report will be useful in providing students with personalized guidance and advice related to career-building or formation for internship preparation education. At the same time, through an individualized learning process, students are expected to obtain instructive and concrete learning outcomes related to their career plans for the future, enabling them to proactively consider their participation in internship programs and work experience in companies.

## **2. Research Objectives**

The purpose of the survey is to clarify students' desired job categories and industry types for employment after graduation in the second semester of the third year (2/2022 semester, January-May, 2023) before conducting practical training at a company in the first semester of the fourth year (1/2023 semester, August-December, 2023). Additionally, it is also to find out whether students' desired job categories and industry types are relevant to their decision of internship company or not.

## **3. Related Research**

### **3.1 Sources of information on job categories and industry types**

Since the companies in Japan generally hire new graduates on a regular basis, they provide job information on employment conditions, including welfare benefits and compensation packages, as well as information on job category, industry type, and business field involved with their companies. It is expected that students will also decide on their desired job categories and type of industries by considering the employment conditions from company sides and their own job-seeking conditions in response to various employment offers information. *Recruitment agencies* called employment support companies accurately and efficiently provide employment information of companies for students who are looking for a job in response to requests from job seekers. In Japan, 1,414 recruitment agencies for employment support are listed on the website (Baseconnect Inc, 2017). These companies conduct surveys on a regular

basis, and publish the survey results in order to objectively grasp the trends in students' job-seeking attitudes and overall job-search activities. On the other hand, it is stated that there are 42 labor hire companies that provide recruitment services to Japanese companies in Thailand (Jinjer Co., Ltd., 2022). Such companies publish job and recruiting information on their webpages that specify job types, job titles, business types, industries, work locations, and salary amounts. It is also true that such publicly available information is a useful decision-making tool for JBC students when they proceed with their job-search activities, and is believed to be helpful in understanding the type of jobs, industry sectors, and business fields. Companies that are recruiting for jobs and employment support agencies are required to provide and disclose accurate and reliable job information.

### **3.2 Job categories covered in this paper**

A job category refers to the type of work and can be considered as a job description for an individual unit, i.e., a job category is an individual name classified by job description. As a list of job category, there is *the Occupational Classification compiled by the Ministry of Health, Labour and Welfare* (MHLW, 2022), which is actually a systematic classification of occupations based on consistency with *the Japan Standard Industrial Classification of Occupations compiled by the Ministry of Internal Affairs and Communications* (MIC, 2009). As of 2023, *the MHLW Classification* lists 15 major classifications, 99 medium classifications, and 440 minor classifications, and is widely utilized as a reference. In this paper, a job category list (12 occupational lineages and 87 job titles) created by Port Inc. was used, and representative-occupational lineages and job titles are listed, considering business Japanese human resources in Thailand.

### **3.3 Industry types covered in this paper**

Industry type is a type of business activity of a company, and means the field of business that the company is engaged in. In view of the current situation that one company is not only one particular business, it is appropriate to consider the main business field, although it is necessary to be careful when classifying industries. The industries in this paper are based on *the Japan Standard Industrial Classification* (JSIC), a classification list of industry types compiled by the Ministry of Internal Affairs and Communications (MIC, 2013). This classification list is based on *the International Standard Industrial Classification of All Economic Activities* (ISIC) by the United Nations. Currently, there are 20 major types, 99 medium types, and 1,473 minor types, however, in this paper, 19 major types were used, excluding unclassifiable industries in the major types. According to the results of JETRO's *Survey on Japanese Business Expansion Trends in Thailand 2020*, the number of Japanese companies in Thailand was 5,856 (22 industry types), and 40.03% (2,344 companies) were in the manufacturing industry, followed by 25.38% (1,486 companies) in the wholesale/retail industry, and 17.35% (1,017 companies) in the service industry (10 industry types). The total number of non-manufacturing companies (18 industry types) was 2,890, accounting for 55.62% (JETRO, 2021).

## **4. Research Methodology**

### **4.1 Research Design**

In line with the research objectives, the research was designed with attention to the neutrality without bias survey results, the reliability to indicate the level of the survey results, and validity of the survey content that leads to correct measurement results. These are intended to ensure unbiased and accurate observations. In this research, a quantitative survey was adopted to quantify the students' thoughts. The numerical results were processed with

descriptive statistics in order to emphasize its accuracy and objectivity (Casio Computer Co., Ltd., 2023), and data/statistical analysis and consideration of the analysis results were advanced.

#### 4.2 Target Group

The target group in this survey consisted of 51 third-year students of JBC department, 18 male students (35.29%, round numerical result off to two decimal places, hereinafter the same shall apply) and 33 female students (64.71%), and they were enrolled in *JBC332 Japanese for Management* course in the second semester of 2022 (2/2022, January-May, 2023).

#### 4.3 Research Instrument

A questionnaire method created with *Google Forms* (Free survey creation and management software) was adopted, and the survey was conducted on April 21, 2023 by asking an instructor in charge of *JBC332 Japanese for Management* course to cooperate with the questionnaire survey. The questionnaire survey consisted of five questions; 1) Presence or absence of desired job after graduation, 2) Specific desired job category, 3) Presence or absence of desired industry after graduation, 4) Specific desired industry type, and 5) Presence or absence of desired job category/industry type for practical training at a company, or internship program. Each question item was a closed-ended question. Questions 1), 3), and 5) were single-answer questions, and questions 2) and 4) were multiple-answer questions with a limit of three answers.

#### 4.4 Data Collection

Responses were collected from 28 out of 51 students (54.90%). There were no invalid responses, and the number of valid responses was 28. The breakdown of gender was 8 male students (28.57%) and 20 female students (71.43%). The reliability coefficient or internal consistency of the answer results (Cronbach's alpha coefficient), was 0.97 and 0.93 for questions 2 and 4, which were multiple-answer formats, respectively (Calculated using Microsoft Excel).

#### 4.5 Data Analysis

##### 4.5.1 Presence or absence of job category desired by students

Table 1 shows the results of students' responses to the question of whether they have already decided on the desired job category when they find a job after graduation. The standard deviation (SD) for question No. 1 was 8.08. Among the three responses, the number of respondents who had decided *to some extent* was the most, accounting for 64.29% of 18 respondents. Including 28.57% of 8 respondents who had already decided, 92.86% of 26 respondents had already decided, although there was a difference in the degree to which they had already decided.

Table 1 Presence or absence of job category desired by students for employment after graduation

Answer	Respondents	Percentage
1. Students have already decided on a job category.	8	28.57
2. Students have decided on a job category to some extent.	18	64.29
3. Students have not decided on a job category yet.	2	7.14
<b>Total</b>	<b>28</b>	<b>100.00</b>

#### 4.5.2 Job categories desired by students

Table 2 shows the results of students' responses (multiple answers for up to three choices) regarding their desired job category.

Table 2 Job categories desired by students for employment after graduation

	<b>Occupational lineage</b>	<b>Responses</b>	<b>%</b>	<b>Job title</b>	<b>Responses</b>	<b>%</b>
<b>1</b>	Office work/ Management	33	46.48	Sales affairs	2	2.82
				General affairs	2	2.82
				Human resources	2	2.82
				Reception	4	5.63
				Secretary	5	7.04
				Trade affairs	2	2.82
				Accounting in English	1	1.41
				Interpretation/Translation	15	21.12
<b>2</b>	Sales	2	2.82	Sales/Planning sales/Rounder	2	2.82
<b>3</b>	Planning	15	21.12	Public relations/Advertisement	4	5.63
				Marketing	7	9.86
				Corporate planning	4	5.63
<b>4</b>	Sales/Service	12	16.90	Mobile phone/Home appliance sales	1	1.41
				Hall staff	1	1.41
				Hotel-related/Resort staff	6	8.45
				Travel office/Travel counter staff	4	5.63
<b>5</b>	Creative	2	2.82	Producer/Editor/Proofreader/Writer	1	1.41
				Graphic designer	1	1.41
<b>6</b>	IT engineer	1	1.41	Programmer	1	1.41
<b>7</b>	Education	3	4.23	Instructor/Lecturer	2	2.82
				Cram school teacher	1	1.41
<b>8</b>	Finance	1	1.41	Trader/Dealer	1	1.41
<b>9</b>	Others	2	2.81	Others	2	2.82
	<b>Total</b>	<b>71</b>	<b>100.00</b>	<b>23 Job categories</b>	<b>71</b>	<b>100.00</b>

Among all 12 classified occupations (occupational lineage in Table 2), 9 occupations were selected (75.00%), while 3 occupations that were not selected at all were *Medical care/Nursing care*, *Engineering*, and *Research/Development* (25.00%). 46.48% of the responses were *Office work/Management*, accounting for about half of the total. Of the total 87 job titles, 23 were selected (26.44%), and 64 (73.56%) were not selected at all. The average was 3.09, and SD was 3.13 in question No. 2.

#### 4.5.3 Presence or absence of industry type desired by students

Table 3 shows the results of responses on whether or not students have decided on industry type they find a job after graduation.

Table 3 Presence or absence of industry type desired by students for employment after graduation

Answer	Respondents	Percentage
1. Students have already decided on an industry type.	6	21.43
2. Students have decided on an industry type to some extent.	18	64.29
3. Students have not decided on an industry type yet.	4	14.28
<b>Total</b>	<b>28</b>	<b>100.00</b>

Four respondents (14.28%) answered that they had not decided yet, and 18 students (64.29%) answered that they had decided on an industry type *to some extent*. Including 6 students (21.43%) who answered that they had already decided on an industry type, 24 students accounted for 85.72%, which was about 90% of all respondents. The standard deviation in question No. 3 was 7.57.

#### 4.5.4 Industry types desired by students

Table 4 shows the results of students' responses to their desired industry type (multiple responses for up to three choices).

Table 4 Industry types desired by students for employment after graduation

Industry type	Responses	Percentage
A. Agriculture/Forestry	2	3.46
E. Manufacturing	6	10.34
F. Electricity/Gas/Heat supply/Water	1	1.72
G. Information communication	4	6.90
H. Transportation/Postal	1	1.72
I. Wholesale/Retail	7	12.07
K. Real estate/Goods leasing	4	6.90
L. Academic research/Professional/Technical service	1	1.72
M. Accommodation/Food service	12	20.69
N. Life-related services/Entertainment	4	6.90
O. Education/Learning support	6	10.34
R. Service industry (Unclassifiable industry)	10	17.24
<b>Total</b>	<b>58</b>	<b>100.00</b>

Of the total 19 industries, 12 were selected (63.16%) and 7 were not selected at all (36.84%). There were 12 responses from *Accommodation/Food service industry*, accounting for 20.69%, and 10 responses from *Service industry*, accounting for 17.24%. In the double-digit response rate, 7 responses from *Wholesale/Retail industry*

accounted for 12.07%, and 6 responses from *Manufacturing industry* accounted for 10.34%. The average value for question No. 4 was 4.83 and SD was 3.56.

#### 4.5.5 Presence or absence of desired occupation and industry for corporate internship

Table 5 shows the answers to a question about students' views on occupation and industry for internship at company before graduation.

Table 5 Presence or absence of occupation/industry desired by students in corporate internship

Answer	Respondents	Percentage
1. Students want to do corporate internship in the type of job and industry that they desire.	11	39.29
2. Students want to train at a company that has the type of job they desire. Internship participation can be practiced in any industry.	11	39.29
3. Students want to do corporate internship at a company in an industry that they desire rather than job category.	3	10.71
4. Regardless of the type of job or industry students desire, they can train at any company for corporate internship.	3	10.71
<b>Total</b>	<b>28</b>	<b>100.00</b>

The number of respondents who answered *Students want to do a corporate internship in the type of job and industry that they desire* and *Students want to train at a company that has the type of job they desire. Internship participation can be practiced in any industry* were the same number of 11 respondents, accounting for 39.29%, respectively, in corporate internship before graduation. In the corporate training, the number of respondents who answered that *Students think about industry type they desire rather than job category* and *Students do not mind any type of job/industry* were the same number of 3 respondents each, accounting for 10.71%. The standard deviation (SD) was 4.62.

## 5. Research Findings

### 5.1 Presence or absence of job category desired by students

Only 8 students (28.57%) indicated that *They had already decided on job category*, accounting for only about 30% of the total. At the same time, as 18 students (64.29%) responded that *they had decided to some extent*, the fact that *Students had decided on their job to some extent* could be interpreted as a situation that they found a suitable job for themselves. Even though there was a job type they desire, it appeared that they continued to be put in the process of deciding on a job category. In any case, it can be said that it is important to decide on a career through a process that allows students to consider and make decisions based on their abilities, qualities and aptitudes, including their own interests, rather than simply their preference of likes or dislikes.

### 5.2 Occupations/Job titles desired by students

*Office work/Management* occupations accounted for the largest number of responses with 33, or 46.48% of the total. As for a specific job title, *Interpretation/Translation* was seen in 15 responses, occupying the first place

with 21.12%. In a sense, it is natural for students majoring in Japanese to think that this is the occupation in which they can make the most of their Japanese language skills. Next, 15 responses for *Planning* occupations accounted for 21.12% of the total. The most specific job title was *Marketing*, with 7 responses, or 9.86%. Thirdly, *Sales/Service* occupations were 12 responses, or 16.90% of the total. The specific job titles were *Hotel-related/Resort staff* (6 responses, 8.45%) and *Travel office/Travel counter staff* (4 responses, 5.63%), for a combined 10 responses, or 14.08% of the total. In terms of occupational lineage, *Office work/Management, Planning, and Sales/Service* accounted for 84.50% of the total. The remaining six occupational lineages only accounted for single-digit percentages, however, it was also true that the overall results of the responses showed that students selected a variety of occupations, as 23 job categories were found. It was unclear whether students were considering occupations that directly or indirectly use Japanese in their post-graduation employment. However, it is also true that, with the exception of *Interpretation/Translation* job, there are occupations that Japanese language major is advantageous. Therefore, it is possible that some of the job titles students desired job in 23 job categories are related to their major in Japanese. Conversely, there is a need to investigate the actual situation regarding occupations other than *Interpretation/Translation* job that Japanese language can be fully utilized.

### **5.3 Presence or absence of industry type desired by students**

Regarding students' preferences for the industry types, the combined total of *They had already decided on the type of industry* and *They had already decided to some extent* accounted for 85.72%, or approximately 90% of the total. This was almost the same high percentage as the result of the combined *They had already decided* (28.57%) and *They had decided to some extent* (64.29%) responses (92.86%) for desired job categories (See Table 1). It was understood that job type and industry were considered as a set when students proceeded with their job searches. As with the choice of job type, it is important that a decision on industry type is not a sensory choice based on students' likes and dislikes, but rather a process that enables accurate judgments based on industry trends and future potential.

### **5.4 Industry types desired by students**

The number of responses for *Accommodation/Food service* (M) was 12, accounting for 20.69%, and when combined with other service industries (L, N and R), 27 responses accounted for 46.55%, or about half. Seven responses from *Wholesale/Retail industry* (I) accounted for 12.07%, and responses to *Manufacturing* (E) and *Education/Learning support* (O) were the same number of 6 each, accounting for 10.34%. Looking at *the entire non-manufacturing industry* (F-R), the total number of responses was 50, accounting for 86.21%. The ratio was significantly higher than the combined 13.80% for *Agriculture/Forestry* (A), which accounted for 3.46% in two responses, and *Manufacturing industry* (E), which accounted for 10.34% in six responses. According to Colin Clark's industry classification (Ohta, 2010), it could be said that most of industry types desired by students were in *the tertiary industry* (F-R).

### **5.5 Presence or absence of occupation/industry desired by students for corporate internship**

11 students, or 39.29%, indicated preference for their job and industry for internship at company before graduation. It was found that approximately 40% of students might relate the type of job and industry during their corporate internship to job-seeking activities after graduation. Similarly, 11 students, or 39.29%, or about 40%, thought that industry type would be their next choice, and that they would first decide on job type and then participate in practical training regardless of industry type. There were 22 students who wanted to participate in company training

with their desired occupations, accounting for 78.58%, which is about 80% of the total. Only 3 students, or 10.71%, considered internships in their preferred industries rather than their occupations. Regarding practical training, it could be pointed out that students were in a situation that they were considering their desired occupations with priority. Based on the results of students' responses regarding their desired occupations after graduation, it was unclear whether the students intended *Office work/Management* (46.48%), *Planning* (21.12%), and *Sales/Service* (16.90%) in their corporate training or not.

## 6. Conclusion and Suggestion

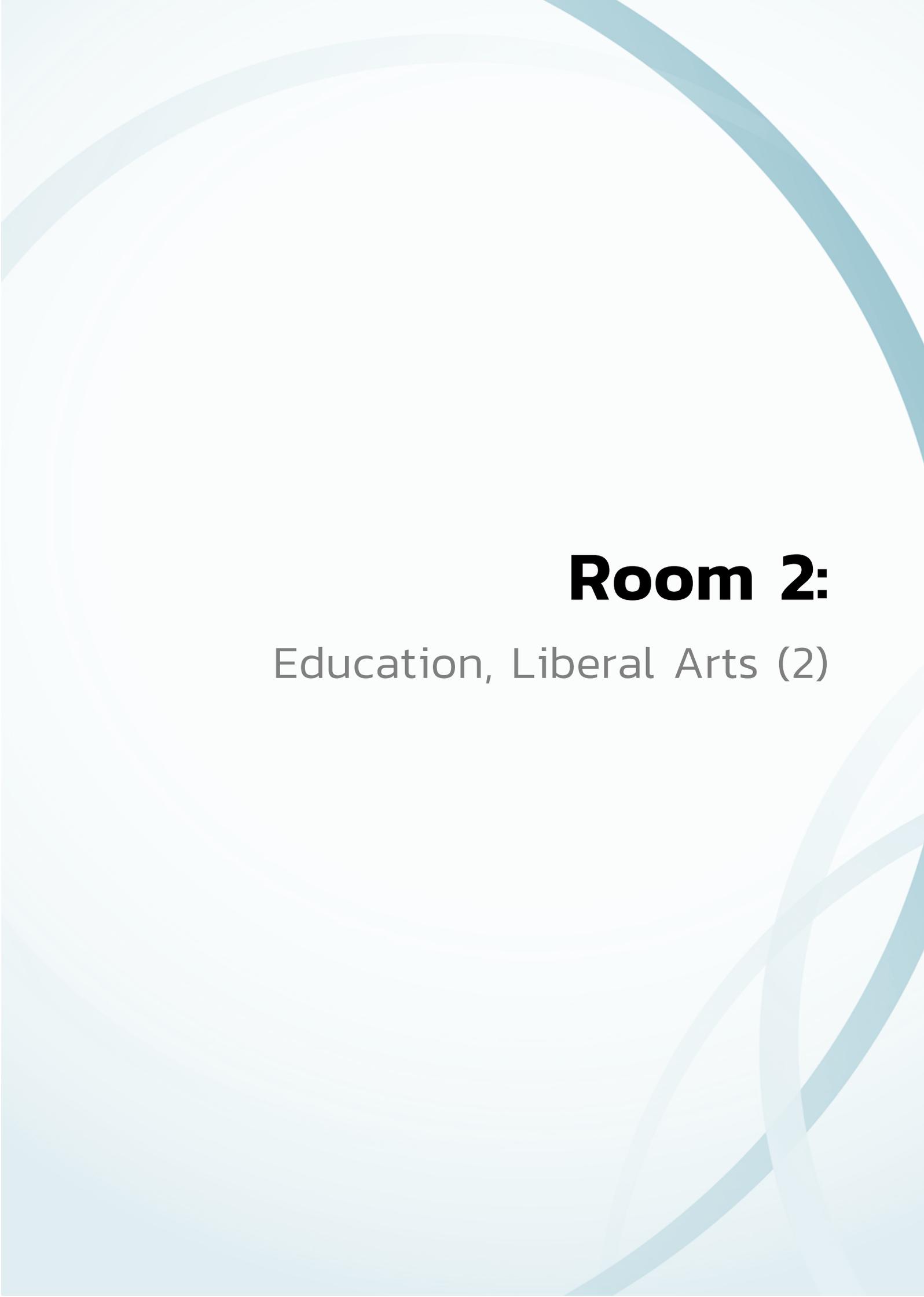
From the analysis results and findings of this questionnaire survey, 92.86% of the students answered that they had already decided on job categories, including *to some extent*, when finding employment after graduation. In addition, 85.72% of the students answered that they had already decided on industry types, including *to some extent*. It turned out that the students' own career images after graduation were established. On the other hand, with regard to pre-graduation company training or internships, the percentage of students who answered that they wanted to have internships at companies with desired occupations/industries and companies with desired occupations accounted for the same percentage of 39.29%, respectively. Compared to students' career images after graduation, the answer results showed a low percentage. It was suggested that the pre-graduation companies training and post-graduation job-search activities were not necessarily directly connected. However, 84.50% of the students answered that they desired to work in *Office work/Management*, *Planning*, and *Sales/Service* after graduation. In any case, it is expected that corporate training is an opportunity for students to consider their career design or career plan fully and carefully, including their own career vision. There are two aspects to the valuable experience of students' corporate internships before graduation, that is, it can be pointed out that there is *Career experience* to acquire and improve the specialized knowledge, practical expertise, and skills necessary for the job, and *Workplace experience* to develop the essential basic abilities and general work skills as a member of society. Regardless of either experience, corporate internships are also an opportunity to gain direct understanding of occupations and industries. In any case, it is important to make use of many outcomes in corporate training for job-search activities after graduation, and to serve as a starting point for a career growth that enables prospective *career development* for students.

## 7. Acknowledgements

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# **Room 2:**

Education, Liberal Arts (2)

**Investigating current situation of Chinese Literacy management: A Case Study of  
Baohua Primary School students in Jinan City**

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**ABSTRACT**

This study had two purposes: 1) To investigate the current situation of Chinese language literacy management in primary schools - A case study of Baohua Primary School students in Jinan City. 2) To propose guideline the Chinese literacy management A case study of Baohua Primary School students in Jinan City. To investigate problems and needs, divided the population into two groups; That is, 1) 28 Chinese language teachers and 2) 1956 parents of students. The sample groups for investigating problems and needs are divided into two groups; 1) 28 Chinese language teachers and 2) 489 parents of students. In addition, the focus group discussion also utilized these three special sessions. The research tool used in this study is a questionnaire survey and a set of questions from a focus group discussion. Analyze the collected information and data through content analysis methods, and present them in the form of frequency counts, mean values, and standard deviations. The Likert rating scale is used to rate the degree or level of problems and needs. The research results indicate that: 1) the problem of students lacking effective literacy methods is at the "highest" level. 2) The need to explore more methods for students to recognize characters is also at the "highest" level. Propose guidelines based on the survey results, including four parts; Namely: 1) Recognizing Characters guidance; 2) Reading guidance; 3) Writing guidance, 4) Oral communication guidance. Three experts evaluated and approved the correctness and suitability

of all four parts, with an IOC value between 0.66 and 1.0. It can be assumed that this strategic guideline is suitable as a guideline for improving the Chinese literacy of primary school students.

**Keywords:** Primary school, Primary school students, Chinese literacy

## 1. Background

The concept of "Chinese language literacy" was first clearly proposed in the 2001 "Compulsory Education Chinese Language Curriculum Standards" and has increasingly attracted people's attention. The "Compulsory Education Chinese Language Curriculum Standards (2022 Edition)" once again emphasizes the importance of "Chinese language literacy" and extracts the connotation of core literacy; namely, The core competencies cultivated in compulsory education Chinese language courses are accumulated, constructed, and demonstrated by students in active Chinese language practice activities, and are a comprehensive reflection of cultural confidence, language use, thinking ability, and aesthetic creation."(Ministry of Education of the People's Republic of China 2022) clarifying which aspects of the core literacy cultivated in the compulsory education Chinese language curriculum include important content. Therefore, evaluating the formation and development of primary school students' Chinese literacy has become an important topic in primary school Chinese education.

## 2. Objectives

(1) To investigate the current situation of primary school Chinese literacy management : A case study of Baohua Primary School students in Jinan City.

(2) To propose guideline the Chinese literacy management: A case study of Baohua Primary School students in Jinan City.

## 3. Review of Literature

### 3.1 Concepts/Theory/ Related Research

The theoretical foundations of this study include synergy theory, overlapping impact threshold theory, humanistic learning theory, and constructivist learning theory. Pi Liansheng (2021) defines knowledge as "the knowledge and organization obtained by an individual in their interaction with the surrounding environment. It is divided into personal knowledge and knowledge in books." It is a broad psychological concept of knowledge, including the integration of knowledge, skills, and strategies. Wang Yunfeng (2021) believed that "language knowledge is people's language experience, is people's response to their own or others' speech act and goals in the speech process of listening, speaking, reading and writing, and is the subjective expression of language characteristics and interrelationship. Xia Hao (2022) believes that language is a comprehensive skill, not a purely professional skill. It refers to the language manipulation ability possessed during the four basic language activities, including external language manipulation and internal psychological manipulation. From this perspective, it can be seen that language skills mainly refer to specific language operations and certain

intelligence- based abilities. This comprehensive understanding and understanding of language ability is consistent with students' cognitive development patterns, and has a certain reference value for evaluating the development of primary school students' language .Professor Wang Wenjuan (2022) proposed that cultivating students' Chinese literacy is the starting point and destination of Chinese classroom teaching. Actively exploring effective ways to evaluate Chinese literacy not only enables students' learning and teachers' teaching to develop in depth, but also effectively promotes the development of students' Chinese core literacy.

### 3.2 Conceptual Framework

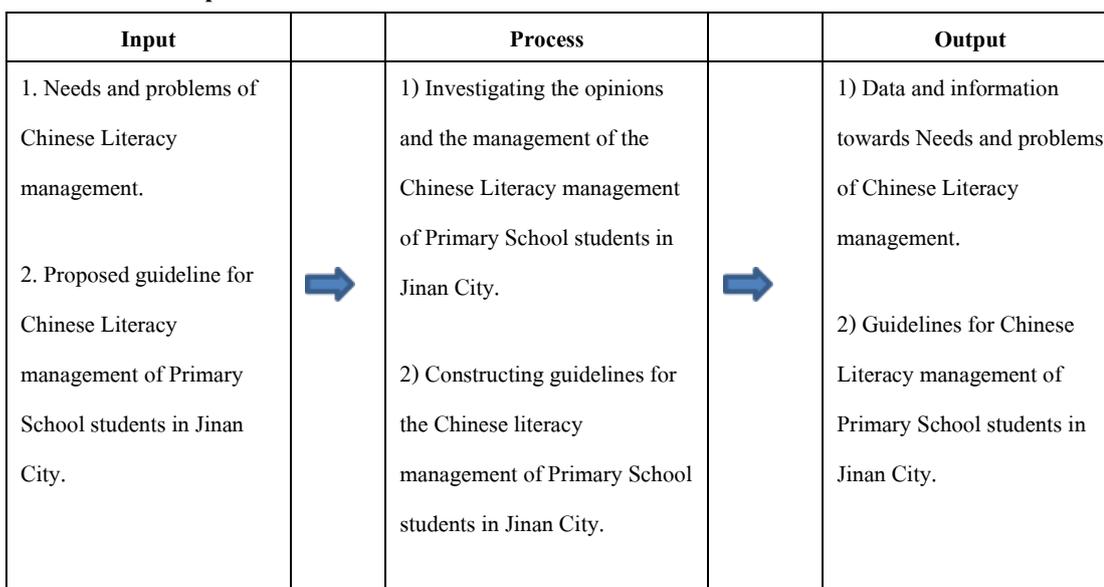


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population /Sample

Baohua Primary School in Jinan City was used as a case study. In this study, the population was divided into two groups; 1) 28 Chinese language teachers, 2) 1956 students' parents. The sample groups in this study were divided into 2 groups: namely, 1) 28 Chinese language teachers (Yamane, 1973) and 2) 489 students' parents (Yamane, 1973). The sample groups were obtained through stratified random sampling technique.

### 4.2 Research Instrument

4.2.1 The survey questionnaires. The survey mainly adopts self- designed questionnaires, which include 3 parts: 1) General information. 2) Problems of Chinese Literacy. 3) Needs of Chinese Literacy

4.2.2 A set of Question for focus group discussion: Three experts held a focus group meeting and conducted research. Proposed guideline on strengthening the management of students' Chinese literacy in Baohua Primary School in Jinan City.

The questionnaire was evaluated for its validity by the Index of Congruence (IOC) by the three specialists. Each question in the questionnaire was in the range of IOC 0.66 to 1.00. In addition, the questionnaire was evaluated for its reliability by the Alpha Cronbach Coefficient with the value of 0.83.

### 4.3 Data Collection

#### 4.3.1 Distribution of survey questionnaires

Implementation of questionnaire survey form teachers and students' parents the survey subjects. In this survey, a total of 517 questionnaires and were distributed to 28 teachers and 489 students' parents as sample group by mail.

#### 4.3.2 Implementation of questionnaire survey

The survey questionnaire of this study aims to investigate the language literacy of primary school students, and the survey location is Baohua Primary School in Jinan City. A total of 517 mailed questionnaires were distributed to 28 teachers and 489 elders in this survey.

In this survey, a total of 517 questionnaires were distributed to teachers and parents of students, with 501 questionnaires collected. The recovery rate of the questionnaires was 96.9%, and the number of valid questionnaires collected was 499. The effective rate of the collected questionnaires was 99.6%. Among them, 28 questionnaires were collected by teachers and 471 questionnaires were collected by parents of students. Statistics were conducted on the sources of students' information.

### 4.4 Data Analysis

1) For the investigation of problems and needs, the Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems. For the rating reference table of The Five Point Likert Rating Scale.

2) For the correctness and improvement of the strategic guidelines, the ideas, suggestions and comments of the 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the guidelines.

## 5. Research Results

### 5.1 Problems and Needs of Chinese Literacy to teacher's opinion

Table 1 Problems and Needs of Chinese Literacy to teacher's opinion

Problems	Questions	n=28		Level of problems
		$\bar{X}$	S.D.	
Recognizing literacy	1.Students lack effective literacy methods	4.73	0.33	Highest
	2.Less guideline for students in literacy and writing exercises	4.68	0.21	Highest
	3.I need to remind students of their writing posture at all times	4.15	0.29	High

Problems	Questions	n=28		Level of problems
		$\bar{X}$	S.D.	
Reading literacy	1.The reading range of students is relatively narrow	4.61	0.31	Highest
	2.Students lack interest in reading	4.57	0.26	Highest
	3.Students are hesitant to read aloud and do not read fluently	3.62	0.29	High
Writing literacy	1.Lack of theme in student writing content	4.25	0.38	High
	2.Students do not attach high importance to their writing skills	4.12	0.43	High
	3.Students lack interest in writing	3.63	0.26	High
Oral communication literacy	1.Students lack initiative in answering questions in class	4.67	0.50	Highest
	2.Students lack vocabulary and cannot accurately express their intentions during communication	2.89	0.29	Middle
	3.Students may not use polite language correctly when communicating with others	2.31	0.36	Low
Needs	Questions	$\bar{X}$	S.D.	Level of needs
Recognizing literacy	1.Explore more ways for students to recognize characters	4.68	0.23	Highest
	2.Hope to increase students' time for literacy and writing practice	4.15	0.31	High
	3.Motivate students to seek advice from me when encountering unfamiliar words	3.71	0.52	High
Reading literacy	1.Expand students' reading range	4.37	0.32	High
	2.Cultivate students' habit of writing after reading	3.99	0.41	High
	3.Enrich students' reading content	3.73	0.39	High
Writing literacy	1.Organize activities to cultivate students' interest in writing	4.33	0.34	High
	2.Increase knowledge reserves and enrich students' writing content	4.07	0.45	High
	3.Cultivate the habit of students checking and revising their own compositions	2.76	0.26	Middle
Oral communication literacy	1.Guide students to actively speak in class	4.55	0.26	Highest
	2.Cooperation and mutual assistance, teaching students to listen and understand	3.39	0.18	Middle
	3.Demonstrate imitation and teach students the correct use of polite language scenarios	2.34	0.40	Low

According to table 1, for the problems, for the Recognizing literacy aspects, the highest problem is “1. Students lack effective literacy methods” ( $\bar{X}=4.73, S.D.=0.33$ ). For the Reading literacy aspects, the highest problem is “1. Lack of theme in student writing content” ( $\bar{X}=4.61, S.D.=0.31$ ). For the Writing literacy, the highest problem is “1. Lack of theme in student writing content” ( $\bar{X}=4.25, S.D.=0.38$ ). For the Oral communication literacy, the highest problem is “1. Students lack initiative in answering questions in class” ( $\bar{X}=4.67, S.D.=0.50$ ).

For the needs, for the Recognizing literacy aspects, the highest need is “1. Explore more ways for students to recognize characters” ( $\bar{X}=4.68, S.D.=0.23$ ). For the Reading literacy aspects, the highest need is “1. Expand students' reading range” ( $\bar{X}=4.37, S.D.=0.32$ ). For the Writing literacy, the highest need is “1. Organize activities to cultivate students' interest in writing” ( $\bar{X}=4.33, S.D.=0.34$ ). For the Oral communication literacy, the highest need is “1. Guide students to actively speak in class” ( $\bar{X}=4.55, S.D.=0.26$ ).

### 5.2 Problems and Needs of Chinese Literacy to students' parents' opinion

Table 2 Problems and Needs of Chinese Literacy to students' parents' opinion

Problems	Questions	n=471		Level of problems
		$\bar{X}$	S.D.	
Recognizing literacy	1. Less guideline for children in literacy and writing exercises	4.61	0.36	Highest
	2. My child's writing posture requires constant reminders from me	4.11	0.28	High
	3. Children lack effective literacy methods	3.35	0.20	Middle
Reading literacy	1. Children's reading range is relatively narrow	4.65	0.37	Highest
	2. Children lack interest in reading	4.32	0.46	Highest
	3. Children are hesitant to read aloud and cannot read fluently	4.11	0.51	High
Writing literacy	1. Children's writing lacks themes	4.37	0.39	High
	2. Children do not attach high importance to writing skills	4.06	0.53	High
	3. Children lack interest in writing	3.75	0.41	High
Oral communication literacy	1. Children lack initiative in answering questions in class	4.78	0.43	Highest
	2. Children lack vocabulary and cannot accurately express their intentions during communication	3.29	0.51	Middle
	3. Children feel very nervous when communicating with others	2.33	0.52	Low

Needs	Questions	n=471		Level of needs
		$\bar{X}$	S.D.	
Recognizing literacy	1.Explore more ways for children to learn literacy	4.37	0.23	High
	2.Hope to increase children's time for literacy and writing practice	3.89	0.31	High
	3.Teach children the correct writing posture and constantly remind them to correct it	3.66	0.30	High
Reading literacy	1.Expand children's reading range	4.68	0.33	Highest
	2.Enrich children's reading content	4.63	0.57	Highest
	3.Cultivate children's habit of writing after reading	3.13	0.25	Middle
Writing literacy	1.Increase knowledge reserves and enrich children's writing content	4.41	0.36	High
	2.Increase the number of writing exercises and gradually improve issues such as unclear sentences	3.62	0.43	High
	3.Organize activities to cultivate children's interest in writing	3.16	0.15	Middle
Oral communication literacy	1.Increase children's vocabulary and learn to express accurately	3.89	0.35	High
	2.Guide children to speak actively in class	3.77	0.25	High
	3.Collaborate and help each other, teach children to listen and understand	3.32	0.44	Middle

According to table 2,for the problems,for the Recongning literacy aspects,the highest problem is “1.Less guideline for children in literacy and writing exercises” ( $\bar{X}$ =4.61,S.D.=0.36).For the Reading literacy aspects ,the highest problem is “1. Children's reading range is relatively narrow” ( $\bar{X}$ =4.65,S. D.=0.37). For the Writing literacy,the highest problem is “1. Children's writing lacks themes” ( $\bar{X}$ =4.37,S. D. = 0.39) . For the Oral communication literacy,the highest problem is “1. Children lack initiative in answering questions in class”( $\bar{X}$ =4.78,S.D.=0.43).

For the needs,for the Recongning literacy aspects,the highest need is “1.Explore more ways for children to learn literacy”( $\bar{X}$ =4.37,S.D.=0.23).For the Reading literacy aspects ,the highest need is “1.Expand children's reading range”( $\bar{X}$ =4.68,S.D.=0.33).For the Writing literacy,the highest need is “1.Increase knowledge reserves and enrich children's writing content”( $\bar{X}$ =4.41,S.D.=0.36).For the Oral communication literacy ,the highest need is “1.Increase children's vocabulary and learn to express accurately” ( $\bar{X}$ =3.89,S.D.=0.35).

### **5.3 Guidelines of Chinese Literacy**

The primary school Chinese language curriculum standards point out that "Chinese language courses should cultivate students' love for Chinese, guide them to correctly understand and use Chinese, enrich language accumulation, cultivate language sense, and develop thinking". Based on the survey results and the requirements of the primary school Chinese curriculum standards, suggestions for guiding primary school students' Chinese literacy have been proposed, including: 1) guidelines for literacy and recognition; 2) Reading guide; 3) Writing guide; 4) A guide to oral communication. Each chapter has exercises and tests. Learners should practice and complete exams after learning, reflect on exam results, and make targeted improvements.

## **6. Discussion of the Research Results**

From the perspective of various dimensions, 471 parents and 28 teachers surveyed in this study believe that the majority of students need to practice regularly to improve their ability to learn Chinese, write, and recognize errors; In terms of Chinese reading, most students enjoy reading extracurricular books very much, but their writing habits need to be improved after reading; The vast majority of students have the awareness of using polite language, can also listen and understand what others are saying, and can retell the content of the article. However, some students have the problem of being afraid to speak or not knowing what to say when communicating and collaborating with others. In addition, although the expression is clear, accurate, and coherent, the language is not vivid enough and lacks infectivity; In terms of Chinese writing, students can realize the importance of writing and have a high interest in it, but their writing skills need to be improved. As Professor Gu Shasha said, In the context of the new curriculum reform, the situation of Chinese language teaching has also undergone significant changes, and the cultivation of Chinese language literacy has officially been put on the agenda. However, due to the influence of traditional teaching concepts and other factors, many teachers are still lagging behind in the methods used in classroom knowledge teaching, greatly affecting students' learning interests and classroom teaching effectiveness, and also not meeting the needs of Chinese language literacy cultivation (Gu Shasha, 2020) There are problems with elementary school students' Chinese literacy, such as weak basic knowledge, poor awareness of self-directed learning, and limitations in fixed teaching models. Therefore, emphasis should be placed on the coordinated development of listening, speaking, reading, and writing abilities, the cultivation of language sense among primary school students, and the cultivation of Chinese language thinking. Based on the design concept of comprehensive curriculum standards, propose guiding principles that include four parts: character recognition, reading, writing, and oral communication. Specifically, it includes stimulating learning motivation, cultivating reading habits, developing good information search habits, and cultivating the ability to express opinions clearly.

## **7. Recommendations for Further Study**

The prominent issue that needs to be addressed in this study is to provide guideline for the improvement and management of primary school students' Chinese literacy ability, which can only be provided to teachers and

parents to a certain extent. With the improvement of China's status in the world, Chinese language will inevitably become an increasingly important discipline, because the improvement of Chinese language literacy is a long and lasting process. In order to improve primary school students' language literacy, it is necessary to adhere to future school and family education. Due to my lack of theoretical knowledge and practical experience, my research depth and breadth have not reached a high level, and my handling of problems is not accurate and thorough enough. There are still many shortcomings in my research, and I earnestly request all teachers to make more corrections so that I can continuously improve in my future research and research.

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**Developing an Academic Administration Guideline on the Application of Positive Psychology into Teaching and Learning System of Primary School Students:  
A Case Study of Guilin Minzhu Primary School**

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**ABSTRACT**

The objectives of this research were: 1) To investigate to problems and needs existing problems of primary school students' mental health. 2) To developing an academic administration guideline on the application of positive psychology into teaching and learning system of primary school students. The respondents of this study were 294 students and 60 teachers obtained through simple random sampling as a case study from Democracy Primary School in Guilin City. The research instruments used in this study were two questionnaires containing 30 questions on five rating scales and a set of questions for the online interview. The information and data collected were analyzed through content analysis method and expressed as percentage, mean and standard deviation. The results showed that: 1) the problems of positive psychoeducation and the needs of teachers and students in Guilin Democratic Primary School were at the "high" and "highest" levels; 2) the needs of teachers and students in Guilin Democratic Primary School were at the "high" and "highest" levels. 3) To developing an academic administration guideline on the application of positive psychology into teaching and learning system of primary school students. Consisting of 5 units. all 5 units have been evaluated by 3 experts with IOC values equal 1.00, which means that the Developing an administration guideline on the Application of Positive Psychology into Teaching and Learning System for Primary School Students it is acceptable and can be used as

a positive psychology teaching manual for Guilin Democratic Primary School to improve students' positive psychological state and form the enthusiasm for happy learning and healthy growth.

**Keywords:** Administration guideline, positive psychology, Primary education, Primary school

## 1. Background

The pedagogical management of Positive Psychology aims to enhance students' positive psychological qualities and promote their healthy development. Positive psychology focuses on the positive aspects of human beings, including positive emotions, positive interpersonal relationships, and positive responses to challenges. Positive psychology provides new perspectives and strategies for instructional management that can help improve the quality of education and students' well-being. This paper will explore how to use positive psychology for teaching management.

Positive Psychology can achieve 1) Positive Psychology plays an important role in education by enabling children to develop in a holistic manner. 2) Students are guided to face difficulties with a positive psychological approach. 3) Positive Psychology can help students to develop a positive outlook on their lives. 4) Positive psychology education brings happiness and self-confidence to primary school students.

Teachers take the initiative to integrate mental health education into education and teaching, use positive psychology concepts to build a harmonious psychological support system of "individual self, classroom environment, and family relationships", pursue the positive self of individual children, and provide positive psychological support in a positive and instructive way, which is well suited to help children with special needs regulate their behaviors in order to adapt to the normal educational environment (Wang Xufeng.2021). Achieve reform of the school system free from excessive repression, restraint and seriousness; construct intimate social support systems with the meaningful presence of significant others. (Zong Jinlian. 2020). The cultivation of positive psychological qualities of primary school students can lead to a more positive impact on life and learning, which is conducive to helping students establish a good learning mood. (Wang Yingchun.2021).

## 2. Objective

1. To investigate to problems and needs existing problems of primary school students' mental health.
2. To developing an academic administration guideline on the application of positive psychology into teaching and learning system of primary school students.

## 3. Review of Literature

### Concepts/Theories/Related Research

Positive Psychology (Positive Psychology) is a school of psychology that emphasises the development and enhancement of positive qualities, including optimism, courage, wisdom, resilience, creativity, love and happiness. It focuses on the positive aspects of health and well-being and aims to increase people's self-awareness,

self-control and self-actualization, in contrast to traditional psychology's treatment of illness and problem-solving, and to promote the prosperity and development of individuals and society. (Han Y, 2022) On the basis of analysis the relationship between positive psychology and positive personality assessment of children and adolescents, the current misunderstandings and dilemmas of personality assessment of children and adolescents are analysed, and it is pointed out that how to carry out positive personality assessment of children and adolescents under the perspective of positive psychology. (Geng XF, Ma LZ, Yang GZ. 2020) Mental health education work aims to cultivate students' positive emotions and personality traits by guiding whole-person practice, thus forming a positive psychological atmosphere on campus and at home. (Li Xue, 2022). In general, "poor academic performance" tops the list of factors causing psychological distress, and there is a great demand for mental health education among students. (Chen Qixin, Lei Guoying, Qin Jun, Liu Lidan, 2019)

Positive psychology is a revolution in the field of psychology and a new milestone in the history of human social development. Positive psychology education is to help people build positive self-awareness, cultivate positive emotional experiences, and shape positive behavior by focusing on people's positive psychological qualities, so as to improve their positive subjective experiences and sense of well-being.

### 3.2 Conceptual Framework

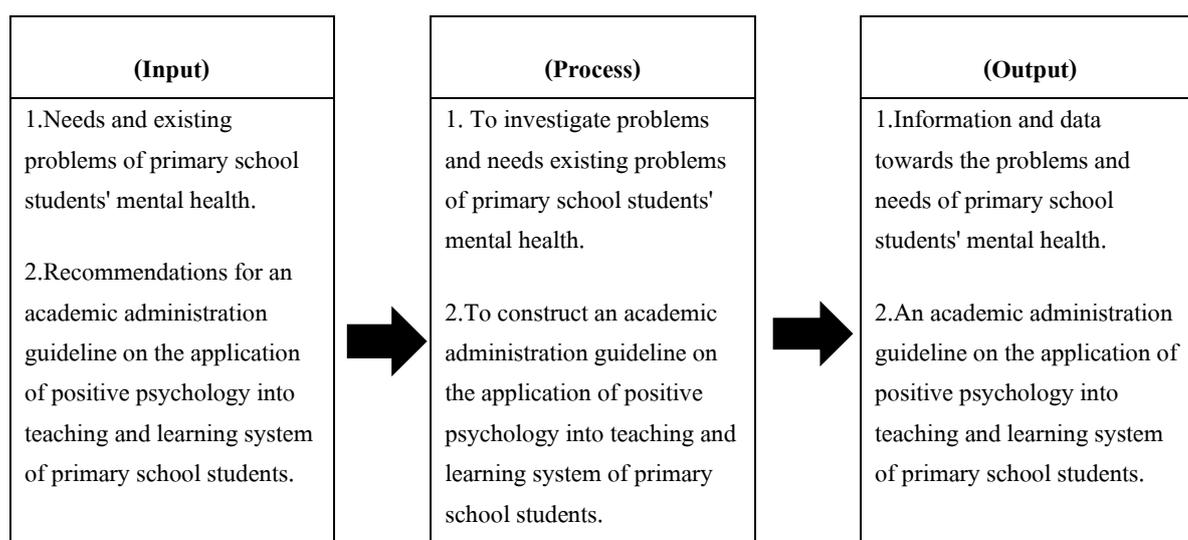


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population and Sample groups

This study will take Guilin Minzhu Primary School as a case study. The population of this study project will be divided into two groups: 1) 1100 students in 2022; 2) and 70 teachers. The sample groups will be divided into 2 groups, namely, 1) 294 students and .2) 60 teachers. The sample size obtained by using Taro Yamane Formula (Yamane, 1973)

#### **4.2 Research Instruments**

1) Questionnaire: Data collection was conducted by questionnaire survey for this research project. The questionnaire was divided into 2 groups, namely, 1) student group and 2) teacher group. The questionnaire was divided into two parts, 1) general information and 2) mental health problems and needs of primary school students. In order to better understand the current situation of primary school and students' mental health, the researchers selected appropriate questions from the SCL-90 symptom self-evaluation scale and the American psychologist Rosenberg Confidence scale Rosenberg Self Esteem Scale questionnaire, and compiled the self-evaluation questionnaire of primary school students' mental health that utilizes Cronbach's alpha to analyze reliability. (Cronbach, 1984) In this section, the questionnaire was evaluated by three experts (a Thai professor and two Chinese professor) on the Conformity Index score (IOC score). The IOC for each question in the questionnaire ranged from 0.66 to 1.00.

2) Focus Group Discussion: The focus group discussed seven questions: 1) What do you think is the importance of integrating positive psychology into primary education? 2) What do you think is the current state of mental health of primary school students in China? 3) What advice do you have for primary school students on how to use positive psychology to be friendly with parents and teachers? 4) What advice do you have for primary school students on how to face the competition in learning and promotion with a positive psychology? 5) What are the contradictions and conflicts in the psychology of primary schools students in interpersonal interactions? How to deal with conflicts and contradictions with positive psychology? 6) What psychological problems can result from imperfect personality development in primary school? How can positive psychology be used to make students' personality development better? 7) What do you think are the current recommendations for the management of psycho-education in democratic primary schools?

#### **4.3 Data Collection**

For the investigation of problems and needs, the researcher himself collected the data and information from the sample groups online via emailing. Moreover, the three focus group discussion meetings were conducted to recruit the comments, ideas and suggestions for the correctness and improvement of the strategic guidelines.

#### **4.4 Data Analysis**

1) For the investigation of problems and needs, the Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Like-rt Rating Scale were used to evaluate the level or degree of the respondents' needs and problems. For the rating reference table of The Five Point Like-rt Rating Scale, see table 3.1

2) For the correctness and improvement of the strategic guidelines, the ideas, suggestions and comments of the 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the guidelines.

## 5. Research results

### 5.1 problems and needs existing problems of primary school students' mental health

#### Administration guideline

Table 1: Problems of students at Minzhu Primary School in Guilin

No.	Questions	n=294 (students)		Level of problems
		$\bar{x}$	S.D.	
1	You think that you don't like to participate in sports activities that you are not good at.	4.75	0.83	Highest
2	You think you will be angry because the teacher misunderstood and severely criticized you.	4.58	0.74	Highest
3	You think it's difficult to communicate with your parents when they're in a bad mood.	4.54	0.84	Highest
4	You think it's difficult to learn about subjects that don't interest you.	3.89	0.42	High
5	You think you are not happy with your height or looks.	4.11	1.39	High
<b>Total</b>		<b>4.34</b>	<b>0.84</b>	<b>High</b>

It can be seen from Table 1:1) The psychological problems of the students are mainly low self-confidence, insufficient skills in a certain sport, and lack of interest. 2) Primary school students generally have the fear of parents and teachers, and this mentality leads to their nervousness and fear when communicating with parents and teachers. 3) For the students, learning is the most important, so they don't pay too much attention to their height and looks.

Table 2: Problems of teachers at Minzhu Primary School in Guilin

No.	Questions	n=294 (students)		Level of problems
		$\bar{x}$	S.D.	
1	You think students get upset when they do poorly on tests.	4.75	0.51	Highest
2	You think students can't be friends with each other when they have serious conflicts.	4.46	0.76	High
3	You think that students don't like to participate in sports activities that they are not good at.	4.62	0.69	Highest
4	You think students are unhappy with their height or looks.	3.87	1.24	High
5	You think that students can't sleep well at night when their parents aren't home.	3.90	1.24	High
<b>Total</b>		<b>4.32</b>	<b>0.89</b>	<b>High</b>

According to table 2 we know that: the pressure of students' psychology includes the contradiction of growing up, the contradiction of communicating with teachers and parents, and the pressure of learning, so there are many ways to face the problems edited in the Administration guideline. There is a big gap between the scores of questions 4 and question 5. For this reason, I asked some teachers why there is such a gap. In the end, we came to the conclusion that: 1) Teachers thought that the subjects of the study were students aged 6-12, and that students in the lower grades were more satisfied with their height and appearance, and many people would praise them for being smart and cute. On the other hand, the senior students often made mistakes and were criticized by their teachers and parents, so they lacked confidence in themselves. 2) Another problem, which was also related to age, was that at night, the junior children were insecure and needed the company of their parents, whereas the senior children were courageous enough to stay home without their parents' company.

Table 3: Needs of students at Minzhu Primary School in Guilin

No.	Questions	n=294 (students)		Level of problems
		$\bar{x}$	<i>S.D.</i>	
1	You need ways to regulate your nerves before an important game or exam.	4.75	0.78	Highest
2	When a teacher misunderstands you, you need to communicate with them first in a friendly way to clear up the misunderstanding.	4.57	0.83	Highest
3	You need some way to make yourself more confident to face all the problems in the classroom.	4.52	0.90	Highest
4	You need some effective ways to ease the conflict with your friends.	4.40	1.39	High
5	When you encounter a problem, you need to take the initiative to find someone to help.	4.41	1.00	High
<b>Total</b>		<b>4.57</b>	<b>0.98</b>	<b>Highest</b>

According to table 3 we know that: 1) students attach great importance to learning and need effective ways of learning. 2) students attach importance to getting along with teachers and friends and hope that everyone will respect each other. 3) a part of primary school students is more independent in their personality and think that they can do things by themselves without help from others.

Table 4: Needs of teachers at Minzhu Primary School in Guilin

No.	Questions	n=294 (students)		Level of problems
		$\bar{x}$	S.D.	
1	You think students need to go to a psychologist for help when they are confused.	4.73	0.61	Highest
2	When there is a conflict between students, you think students need some effective ways and friends to ease the conflict.	4.72	0.64	Highest
3	You think that students need to communicate more with their teachers so that the relationship is better.	4.72	0.42	Highest
4	You think that during the evening hours, students need their parents to be at home with them in order to sleep peacefully.	3.98	1.20	High
5	You think students need effective learning methods to learn subjects they are not good at.	4.42	0.87	High
<b>Total</b>		<b>4.51</b>	<b>0.75</b>	<b>Highest</b>

According to table 4 we know that:1) Most of the students need, how to deal with the relationship with parents and teachers? How can they learn in a better and more efficient way? 2) In question 4 of the teacher's questionnaire, S.D. = 1.20, the reason for this is that the students' ages are different, so the teachers think that their courage and guts are different. Teachers are more concerned about the interpersonal communication and social adaptation skills of the students.

Table 5 Administration guideline applies positive psychology to the teaching system of primary school students in schools.

Units/Contents	IOC
<b>Unit 1</b> Psychological contradictions	1.00
<b>Unit 2</b> Excessive anxiety of primary school students caused by competition in study and promotion.	1.00
<b>Unit 3</b> Conflicts in communication	1.00
<b>Unit 4</b> Problem personality of primary schoolchildren.	1.00
<b>Unit 5</b> Presentation of cases using positive psycho education.	1.00
<b>Total</b>	<b>1.00</b>

According to table 5. Administration guideline applies positive psychology to the teaching system of primary school students in schools. applies positive psychology to the teaching system of primary school students in schools. Approved by three experts (one Thai and two Chinese professors) in the form of a consistency panel and scored by the Index of Consistency (IOC). All three experts agreed that the content of the thesis investigation was important and implementable, so this thesis had research value.

## **6. Discussion of the research result**

The results of the questionnaire: 1) Students' problems scored higher than teachers' problems. 2) Teachers' needs were higher than students' needs. 3) This shows that students do not take the initiative to seek help when they find themselves in trouble. The findings are in agreement with some psycho-pedagogical experts' studies: primary and secondary school students mainly turn to their peer friends for help when they are depressed, and fewer turn to their teachers for help. (Qiao Junya, Yu Yibing. 2021) The health education needs of primary and secondary school students present different characteristics of school age and gender. Health education should follow the characteristics of students' physical and mental development and adapt to their needs. (Shi Xiaoyuan Zhu Yan Zeng Li Du Jinyong Dai Biao, 2020) Based on the research findings of positive psychology, school education should do something about constructing children's positive learning life in at least the following six areas: focusing on the research of children's positive qualities; embedding positive psychology methods into children's learning life; creating child-centred and fully interactive children's learning venues; designing intentional children's learning activities with continuous motivation and partner participation; realising school system reforms that are free from excessive repression, constraints and seriousness; constructing intimate social support systems for the meaningful presence of significant others. serious school system reform; and construct intimate social support systems where significant others are meaningfully present. (Zong Jinlian. 2020)

## **7. Recommendations for Further Study**

How to make teachers correctly understand the important role played by mental health education in moral education work, enhance teachers' cognitive ability to understand the psychology and personal behaviors of primary school students, and make moral education and mental health education integrate with each other, so as to improve teachers' ability to solve the psychological problems of primary school students, is the focus of the moral education work in primary schools. (Li Xucen.2021). The cultivation of positive psychological qualities of primary school students should be carried out in terms of creating effective teaching situations, enriching the content of classroom activities, optimizing the environment of family education, creating a good social atmosphere, and strengthening students' self-education. (Xin Xuwei.2022). The cultivation of positive mental qualities can be regarded as a systematic project, and the educational practice of positive mental qualities in schools can be designed holistically based on systems theory. (Wang Cheng.2021).

In the questionnaire for teachers and students, the needs of Theme 2. Excessive anxiety caused by primary school students' competition in study and promotion and Theme 4. Psychological problems caused by imperfect development of primary school students' personalities scored relatively high, and therefore the following recommendations are made.

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**A Management Guideline Handbook for Pre-school Service Students to Teach Chinese Pronunciation for People Having Defective Speech Organs: A Case Study of Guangxi Vocational College**

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**ABSTRACT**

The objectives of this research were: 1) to investigate needs and problems of pre-school service students to teach Chinese Pronunciation for people having defective speech organs; and 2) to develop a handbook for pre-school service students to teach Chinese Pronunciation for people having defective speech organs. The respondents in this research were 390 students and 252 teachers obtained through simple random sampling at Guangxi Vocational College as a case study. The research instrument employed in this study was a questionnaire with 40 questions for 5 rating scales quality of instrument evaluated for the Index of congruence scores (IOC scores) by the five specialists. The information and data collected were analyzed through the Quantitative Research Method and presented in terms of percentage, mean value, and standard deviation. The findings indicated that: 1) needs and problems of pre-school service students teach Chinese Pronunciation for people having defective speech organs, there are except for two "Middle" level problems, and all others are "Low" level problems; 2) the handbook for pre-school service students to teach Chinese Pronunciation for people having defective speech organs guideline handbook comprises of five units; namely, 1) combination of theory and practice, 2) happy teaching, 3) action-oriented, 4) enriched with teaching resources, 5) rationalize the teaching hours. All of the five units were evaluated by the 5 specialists and possessed the IOC values were 1.00 meaning

the guideline handbook was reliable and valid, could be used as a guideline handbook for students and teachers at Guangxi Vocational College.

**Keywords:** Guideline Handbook, Chinese Pronunciation, Defective Speech Organs, Guangxi Vocational College

## 1. Background

From the result of investigating the Putonghua phonological acquisition of a sample of 120 ordinary preschool children aged 3-6 years old in Guangxi, China found that children before the age of 6 years old learnt Chinese Pronunciation very quickly that there was a sensitive period (Zhou, 2009). Therefore, it is not only necessary but also urgent to grasp the sensitive period of children's articulation learning and provide articulation teaching guidance to preschool children with defective speech organs. According to the U.S. Department of Health in 2012, approximately 7.7% of American children are affected by speech-language disorders (Black et al., 2015). Moreover, the Second China Sample Survey of Persons with Disabilities, in 2006, about 1.27 million people in the Chinese population had a speech disability; beside, the 2013 estimate of the Association of Speech Therapists of Hong Kong, China, children affected by speech-language disorders in Hong Kong, China, accounted for about 10% of the total number of children. Referring to the statistics of the United States, the percentage of children with speech-language disorders in China is estimated to reach 10% to 20% of the total number of children (Shi Dingxu, Yang Yang, 2020). Therefore, there is an urgent need to train preschool service students in China who can provide effective articulation teaching services to preschool children with speech-language organ defects in the future. At present, vocational colleges and universities in Guangxi, China, cultivate preschool service students, and there is a lack of instructional management guidebooks for teaching Chinese Pronunciation to people with language organ defects that meet the characteristics of their physical and mental development and the requirements of their vocational positions, which affects the high-quality cultivation of talents for preschool service students. Facing such a challenge, we need to accelerate the educational and teaching reform and construct a management guidebook for teaching Chinese Pronunciation to persons with language organ defects that meets their use.

## 2. Objectives

1. To investigate needs and problems of teaching Chinese Pronunciation for people having defective speech organs of the pre-school service students
2. To develop a management guideline handbook for teaching Chinese Pronunciation for people having defective speech organs for the pre-school service students

### **3. Review of Literature**

#### **3.1 Concepts/Theories/Related Research**

Students majoring in preschool education services are compound talents with good ideological and moral qualities, solid professional knowledge of preschool education, and the ability to engage in teaching, scientific research and management in child care institutions, education administration departments and other related organizations. It also cultivates compound talents with good ideological and moral qualities, solid knowledge of general and special education, strong teaching practice ability, and the ability to engage in pre-school special education practice, theoretical research and management in special education institutions and related organizations (Steering Committee for Teaching in Higher Education Institutions of the Ministry of Education of the People's Republic of China, China, 2018). In the future, they will become special education teachers who specialize in fulfilling the educational and teaching responsibilities of students with disabilities in special education schools, ordinary primary and secondary kindergartens and other organizations. This includes speech rehabilitation for preschool-aged children with special needs. Chinese is the most spoken language in China. Putonghua is the standard language of modern Chinese. The Law of the People's Republic of China on National Common Language and Writing Systems establishes Putonghua as the national common language. Preschoolers between the ages of 3 and 6 years old are a critical period for learning Mandarin phonetics. A Brief Review of Studies on the Acquisition of Chinese Children's Phonological System (2006) traces the development of research on children's phonology at home and abroad, reviews several influential theories of phonological acquisition, and summarizes the basic process and characteristics of the early development of Chinese children's phonological system. In the article Review of Research on Mandarin Children's Phonological Acquisition (2006), the article reviewed and summarized previous research on Mandarin children's phonological acquisition from three aspects: the different stages and characteristics of Mandarin children's phonological acquisition, the sequence of Mandarin children's phonological acquisition and the types of errors that occur, and the factors affecting Mandarin children's phonological acquisition. Language is the mechanical process of forming articulated speech (spoken language), which is one of the main means of human communication. In order to be loud and articulate during spoken expression, the nerves and muscles involved in speech production must be mobilized (Bloom, 1978). Speech Therapy (Assessment and Treatment of Speech and Language Disorders) (2017) states that according to the functional position, as one of the motor speech centers, its function is mainly to control and coordinate the muscular movements of the articulatory organs such as the jaws, lips, tongue, and soft palate, in preparation for speech formation. When a person speaks and sings, a neurological or muscular lesion occurs in the higher command center of the human brain (including the speech area of the cerebral cortex), which results in effortful speech or dysarthria, making the person a speech disorder patient.

### 3.2 Conceptual Framework

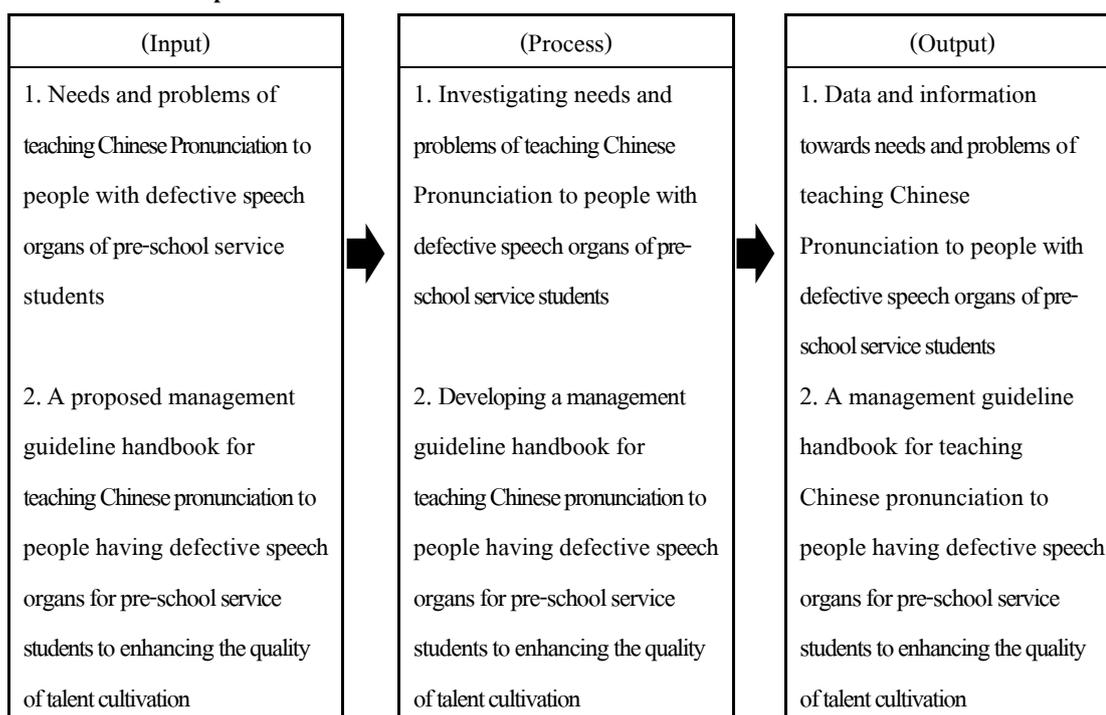


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population/sample/Research Design

This study was conducted in Guangxi Vocational College of Guangxi College for Preschool Education (GXCPE) in Nanning City, Guangxi Autonomous region, China as a case study. The population for this research project were divided into 2 groups; namely, 1) 15303 students in 2023; and 2) 680 teachers. The samples in this study were obtained through stratified random sampling technique and then were divided into 2 groups; namely, 1) 390 students; 2) 252 teachers (Yamane, 1973). Moreover, the 5 specialists were used for the focus group discussion meetings.

### 4.2 Research Instrument

1) Questionnaires: In this research project, a questionnaire was employed for the data collection. The questionnaire was divided into 2 parts; namely, 1) general information, and 2) needs and problems of teaching Chinese Pronunciation for people having defective speech organs for pre-school service students. The questionnaire was evaluated for the validity through Index of congruence (IOC) by the 5 specialists. Each question in the questionnaire was in the range of IOC 0.80 to 1.00. The reliability of the questionnaire was evaluated in terms of Cronbach Alpha Coefficient at 0.80 (Cronbach, 1951).

2) A set of questions for the online focus group discussion meetings to gain ideas comments for the construction of the management guideline handbook for teaching Chinese Pronunciation to people having defective speech organs for pre-school service students were evaluated by the Index of congruence (IOC) score. The score of each question was in the range of IOC 0.80-1.00.

### 4.3 Data collection

For the investigation of needs and problems, the research herself collected the data and information from the sample groups online via emailing. The researcher submitted a letter of permission to the school director in advance to ask a permission to collect the data and information from the samples group at the Vocational College. 400 student questionnaires were distributed and 390 questionnaires were returned, a recovery rate of 97.50%. Teachers' questionnaires were distributed in 260 copies, with 252 recovered, a recovery rate of about 96.92%.

### 4.4 Data Analysis

1) The Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean ( $\bar{X}$ ), standard deviation (S.D.). The Five Point Likert Rating Scale was used to evaluate the respondents' level of needs and problems of teaching of Chinese Pronunciation to people with defective speech organs.

2) The ideas and comments from the 5 specialists obtained from the focus group discussion meeting were analyzed by using Quantitative Research Method and then used to correct and improve the contents of the guideline handbook.

## 5. Research Results

### 5.1 Problems and needs of teaching Chinese Pronunciation for people having defective speech organs for pre-school service students in the opinions of students

Table 1 Problems and needs of teaching Chinese Pronunciation for people having defective speech organs for pre-school service students in the opinions of students

No.	Questions	n=390		Level of problems
		$\bar{X}$	S.D.	
<b>Problems</b>				
1	You are not interested in the course.	2.93	1.43	Middle
2	You don't think the course is important.	2.83	1.61	Middle
3	You are not satisfied with the course teaching resources.	2.38	1.31	Low
4	You believe that teaching Chinese Pronunciation to people with speech organ defects is not helpful to child development	2.38	1.46	Low
5	You believe that teaching Chinese Pronunciation to people with speech organ defects require standards for the China's Putonghua Shuiping Ceshi (PSC).	2.36	1.38	Low
<b>Total</b>		<b>2.58</b>	<b>1.44</b>	<b>Middle</b>

No.	Questions	n=390		Level of problems
		$\bar{X}$	S.D.	
<b>Needs</b>				
1	You believe that the teaching mode of the instructor needs to be a combination of theory and practice.	3.58	1.46	High
2	You believe that in classroom teachers need to be happy teaching.	3.57	1.46	High
3	You believe that the instructor's teaching methods need to be action-oriented.	3.55	1.45	High
4	You believe that the course needs to be enriched with teaching resources.	3.52	1.47	High
5	You believe the course needs to rationalize the teaching hours.	3.52	1.46	High
<b>Total</b>		<b>3.55</b>	<b>1.46</b>	<b>High</b>

According to table 1, the total score is ( $\bar{X}$ =2.58, S.D. =1.44), which indicates that the students' overall feelings about the course questions are middle. The question 1 you are not interested in the course. The highest score ( $\bar{X}$ =2.93, S.D. =1.43). This indicates that the highest problem that exists for students is that they are not interested in the course. As you can see in the table for needs, the total score was ( $\bar{X}$ =3.55, S.D. =1.46), indicating that the students' overall feelings about the needs of the course were towards high. The question 1 you believe that the teaching mode of the instructor needs to be a combination of theory and practice. The highest score ( $\bar{X}$ =3.58, S.D. =1.46). This indicates that students have the highest demand for a teaching model that combines theory and practice.x

### 5.2 Problems and needs of teaching Chinese Pronunciation for people having defective speech organs for pre-school service students in the opinions of teachers

Table 2 Problems and needs of teaching Chinese Pronunciation for people having defective speech organs for pre-school service students in the opinions of teachers

No.	Questions	n=252		Level of problems
		$\bar{X}$	S.D.	
<b>Problems</b>				
1	You are not interested in the course.	2.74	1.54	Middle
2	You don't think the course is important.	2.50	1.60	Low
3	You are not satisfied with the course teaching resources.	2.40	1.31	Low
4	You are not satisfied with the programme teaching hours schedule.	2.34	1.20	Low
5	You believe that teaching Chinese Pronunciation to people with speech organ defects require standards for the China's Putonghua Shuiping Ceshi (PSC).	2.33	1.42	Low
<b>Total</b>		<b>2.46</b>	<b>1.41</b>	<b>Low</b>

No.	Questions	n=252		Level of problems
		$\bar{X}$	S.D.	
<b>Needs</b>				
1	You believe that the teaching mode of the instructor needs to be a combination of theory and practice.	3.55	1.56	High
2	You believe that the instructor's teaching methods need to be action-oriented.	3.51	1.54	High
3	You believe that in classroom teachers need to be happy teaching.	3.48	1.54	Middle
4	You believe that instructional manuals need to be provided for the classroom content of the instructor.	3.46	1.52	Middle
5	You believe that the course needs to be enriched with teaching resources.	3.44	1.56	Middle
<b>Total</b>		<b>3.49</b>	<b>1.54</b>	<b>Middle</b>

According to table 2, the total score is ( $\bar{X}$ =2.46, S.D. =1.41), which indicates that the teachers' overall feelings about the course questions are low. The question 1 you are not interested in the course. The highest score ( $\bar{X}$ =2.74, S.D. =1.54). This suggests that teacher's think the biggest problem students encounter is a lack of interest in the course. As you can see in the table for needs, the total score was ( $\bar{X}$ =3.49 S.D. =1.54), indicating that the teachers' overall feelings about the needs of the course were on the moderate side. The question 1 you believe that the teaching mode of the instructor needs to be a combination of theory and practice. The highest score ( $\bar{X}$ =3.55, S.D. =1.56). This indicates that teacher's think the biggest need students have demand for a teaching model that combines theory and practice.

### 5.3 A Management guideline handbook

A management guideline handbook consists of five units, namely, 1) combination of theory and practice; 2) happy teaching; 3) action-oriented; 4) enriched with teaching resources; and 5) rationalize the teaching hours. All five units were evaluated and possessed the IOC values 1.0 meaning the developed a management guideline handbook for Pre-school Service Students to Teach Chinese Pronunciation for People Having Defective Speech Organs was acceptable and could be used as the guidelines for pre-school service students to teach Chinese Pronunciation for people having defective speech organs of Guangxi Vocational College.

The five specialists (one Thai and four Chinese) assessment the five units in terms of correctness and appropriateness of content and in terms of IOC (Index of Consistency) with a score of 1.00 The Cronbach coefficient values were analyzed by George & Mallery (2020) as  $\geq 0.9$ =excellent,  $\geq 0.8$ =good, and  $\geq 0.7$ =acceptable. The score of 1.00 for the five specialists' assessment indicates that the coefficients of the 5 units developed by the evaluated units are excellent and the contents of the development phase are reliable and

valid. Therefore, the content of the 5 units can be used as the guideline's handbook for pre-school service students to teach Chinese Pronunciation for people having defective speech organs in Guangxi vocational college.

## **6. Discussion of the Research Results**

The findings from the investigation of pre-school service students to teach Chinese Pronunciation for people having defective speech organs problems of Guangxi Vocational College which Guangxi College for Preschool Education (GXCPE) in terms of interest and importance terms of were all in the "Middle" level, indicating that the students' interest in and importance of the course were problematic. It is correspondent with Han Yesong & Zhang Lingyang et al (2020) The findings of these scholars are the same as those of the researcher, both of which concluded that there is a lack of professional emotional education content in the part of service students, and that there is a need to enhance the professional cognition and professional identity of service students. Enhancing vocational cognition and professional identity is very important for the growth of preschool education major pre-school service students, which reflects the ability to serve the society, and allows students to experience self-worth and meaning of life in their present study and future work, thus increasing their interest in the program. Enhancing the vocational awareness and vocational identity of pre-school service students and increasing their interest in learning service knowledge and skills is a good way to implement the national deployment, promote the high-quality development of special education, "do a good job in special education" and effectively protect and improve people's livelihood. In addition, the ability to train students in this way is in line with the needs of the new era and the demand for specialists in the special education industry.

The content of each unit focuses on the teaching of the course, which is mainly reflected in the five aspects of combining theoretical and practical teaching, joyful teaching, action-oriented teaching, enriching teaching resources, and rationalizing teaching time. pre-school service students to teach Chinese Pronunciation for people The teaching examples in the having defective speech organs handbook are derived from more than five years of pedagogical reforms, as well as from cutting-edge methods in international vocational education. With these examples, instructors can understand and use the content of the handbook to successfully complete their teaching. Learners can also use these examples to easily acquire relevant knowledge and skills, enhance their vocational awareness and professional identity, and promote their growth into emotionally-engaged social service workers. This coincides with Li Haiyan & Kang Hongyun (2016). In the work process-oriented learning context, improve the teaching content, clarify the relevant content of the course practice teaching and the form of practice teaching; formulate a teaching guidebook for children with special needs, and transform part of the content into self-study content for guided teaching; establish a teaching practice education platform to guarantee the completion of students' daily learning and course practice; create a diversified teaching evaluation system and an evaluation and feedback mechanism, which facilitates the teachers' timely adjustment of the teaching strategies; improve the practice ability of instructors. It also puts forward the following suggestions: 1) adjust the teaching content according to the local and our school's actual situation and increase the practical teaching content in order to improve the teaching content; 2) combine students' self-study and discussion teaching method, simulation

method, case study teaching method, practical operation method and other methods; and 3) build teaching practice platforms, including on-campus and off-campus practice platforms, improve the practical ability of the instructors, and establish a diversified teaching evaluation system. (Kang Hongyun, et. al. 2016) On the part of the students, the teaching plan of the course is revised in accordance with the quality, knowledge, and ability structure necessary for the actual job duties, focusing on the cultivation of the students' professional skills and at the same time, focusing on the cultivation of the students' innovation ability and lifelong learning ability. In terms of teaching methods, the combination of module teaching and practical teaching is adopted. In the construction of teaching materials, we not only follow the requirements of the Ministry of Health's planning materials, but also focus on collecting students' suggestions and feedbacks, and understand the skills and dynamics of the previous graduated students. In terms of teaching content, not only do we train students in technology, but also focus on strengthening humanistic care, ethical and moral concepts and other quality training.

## **7. Recommendations for Further Study**

1) Further research on the evaluation towards for effectiveness for the pre-school service students to teach Chinese Pronunciation for people having defective speech organs guideline handbook in Guangxi Vocational College must be executed.

2) Further research of factors affecting the competence of pre-school service students to teach Chinese Pronunciation for people having defective speech organs in Guangxi Vocational College must be executed.

3) Further research on the evaluation towards for effectiveness for the pre-school service students to teach Chinese Pronunciation for people having defective speech organs guideline handbook in Guangxi Vocational College must be Promotion.

4) Users of the Guidelines handbook for pre-school service students to teach Chinese Pronunciation for people having defective speech organs in Guangxi Vocational College and Technical College need to receive pre-use training for implementation.

## **8. Acknowledgement**

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**A Construction Handbook for Home Study of Chinese Language for  
Kindergarten Students: a case study of Beien Youyou Kindergarten  
in Chengdu, China**

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**ABSTRACT**

The objectives of this research are 1) to investigate needs and problems of Chinese language teaching and learning of kindergarten students, and 2) to develop the handbook for home study of Chinese language for kindergarten students. The research instruments applied in this study were surveys involving students, teachers, and parents, the research uncovers valuable insights into effective teaching methodologies and content alignment for young learners. The collected survey data were analyzed. Quantitative data, such as Likert-scale responses, were subjected to descriptive statistics to understand the distribution of participants' opinions and attitudes. Frequency distributions and means were used to summarize the responses to closed-ended questions. These findings serve as the foundation for constructing a comprehensive handbook for home study tailored to enhance the Chinese language learning experience of kindergarten students.

Results of this research found that; The overall problems in learning Chinese of kindergarten students were rated the average score was 3.84. The highest level of problem is students find learning Chinese characters at school challenging, as evident from the substantial mean score of 4.52. The overall needs of kindergarten students were rated the average score was 4.49. The highest need is students unanimously express a strong desire for opportunities to speak and practice Chinese with family members, evident through a strikingly high mean

score of 4.79. The overall problems of kindergarten students' Chinese language learning from teacher's point of view found that the average score was 4.20. The highest level of problem is the teachers observe that students face challenges in accurately pronouncing Chinese words during class, as evident from the substantial mean score of 4.73. The overall needs of kindergarten teachers' Chinese language learning support were rated the average score was 4.42. The highest level of need is a Kindergarten teachers emphasize the significance of providing students with opportunities to engage in spoken Chinese practice within the classroom, as demonstrated by the mean score of 4.64. The overall problems of kindergarten students' Chinese language learning from parent's perspective found that the average score was 3.97. The most prominent challenge surface is parents contend with the formidable task of incorporating Chinese learning seamlessly into their child's daily routine at home. This is underscored by the substantial mean score of 4.71.

The proposed handbook addresses key aspects of language learning, including interactive activities, effective practice sessions, guidance and explanations, visual aids, speaking opportunities, feedback, integration into daily life, interactive learning materials, parental involvement, and fostering a positive environment. Each aspect is designed to create an engaging and supportive environment that promotes independent learning and deepens the connection with the Chinese language.

**Keywords:** Early Childhood Education, Chinese Language Acquisition, Home Study, Handbook, Parental Involvement

## 1. Background

Language acquisition plays a crucial role in the early development of children, significantly influencing their cognitive growth and academic journey, especially in the context of Beien Youyou Kindergarten in Chengdu, China, which serves as a valuable case study. Here, learning the Chinese language is not only an obvious part of the curriculum but also a compulsory aspect of kindergarten education. As the foundation for language learning is laid during these formative years at Beien Youyou Kindergarten, it becomes essential to explore innovative and effective methods to assist kindergarten students in mastering the Chinese language, taking into account the unique cultural and educational landscape of Chengdu. The Chinese language holds immense significance in the cultural, social, and academic fabric of China, and this is particularly true in the context of Beien Youyou Kindergarten. Early exposure and proficiency in Chinese are considered fundamental for young learners, leading to its inclusion as an integral part of the kindergarten curriculum. However, ensuring effective language learning in kindergarten settings, such as Beien Youyou Kindergarten, requires a multifaceted approach that extends beyond traditional classroom instruction.

To address this need, the creation of a comprehensive guidance handbook, tailored to the specific needs of Beien Youyou Kindergarten, can serve as a valuable tool for both parents and educators. This handbook can provide structured guidance on language milestones, teaching strategies, and culturally enriched learning activities that make language acquisition more engaging for young learners at this particular institution.

Furthermore, encouraging home study supported by this handbook empowers parents to reinforce classroom learning, creating a cohesive language learning ecosystem at Beien Youyou Kindergarten, and serving as a valuable case study that can inform the development of similar tools in other educational settings.

## 2. Objective

1. To investigate problems of Chinese language teaching of kindergarten students.
2. To investigate needs of a handbook for Home Study of Chinese language for kindergarten students.
3. To develop the handbook for Home Study of Chinese language for kindergarten students.

## 3. Review of Literature

### 3.1 Concepts/Theories/Related Research

Early Childhood Education, also known as nursery education, pertains to the formal and informal teaching of children aged three to six. Its significance lies in nurturing children's physical, mental, and emotional development, while also establishing a foundation for lifelong learning interests (Degrees, 2018; Almon, 2004). This education contributes substantially to children's future academic lives. Home study or family life education, enhances individual and family life through a family-oriented perspective. The National Council on Family Relations (NCFR) defines it as a means to enrich and elevate the quality of family and personal life (NCFR, 2023). It essentially focuses on educating children within their family setting, shaping their values, and influencing their outlook on the world. Zhai Bo underscores the role of home in education, stating that individuals begin molding their worldview and values within their homes, a nurturing environment that carries profound significance (Bo, 2016). Simone Lehl, Maria Evangelou, and Pam Sammons' research emphasize the pivotal role of the home environment in children's language development. The home serves as a primary space for language exposure and informal language learning, thereby significantly impacting language skills and proficiency (Simone Lehl, 2020).

### 3.2 Conceptual Framework

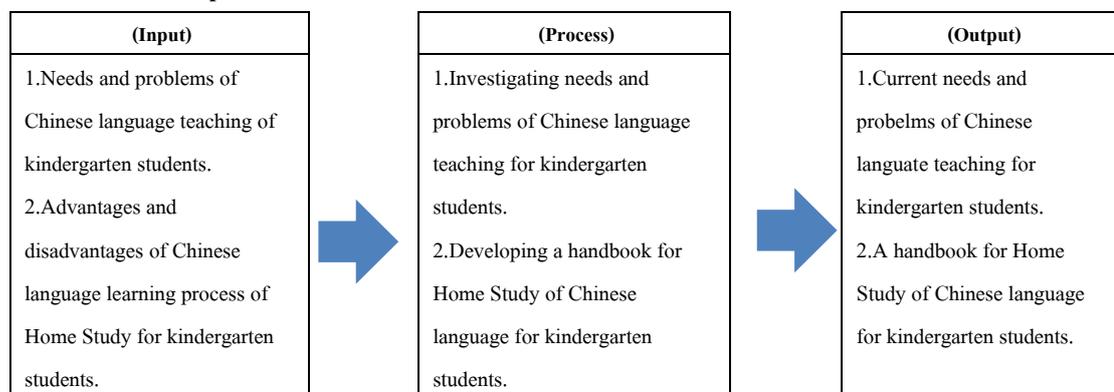


Figure 1. Conceptual Framework of the research

## **4. Research Methodology**

### **4.1 Population/Sample groups**

The research focused on Beien Youyou Kindergarten as a case study, with the population categorized into three groups: 1) 800 current students, 2) 50 teachers, and 3) parents of 800 students. The sample groups consisted of 1) 267 students, 2) 50 teachers, and 3) 267 parents, all selected using the Taro Yamane formula (Yamane, 1973) and use simple random sampling technique.

### **4.2 Research Instrument**

The research utilized a structured questionnaire as its primary tool to collect data on Home Study practices, preferences, and challenges in Chinese language learning. The questionnaire, aligned with research objectives and existing literature, featured Likert-scale questions for standardized opinions and experiences assessment. Respondents were gathered through random sampling via a WeChat app-based survey accessible through a QR code placed at the kindergarten's entrance, engaging parents during pick-up times. Furthermore, the questionnaire's questions underwent evaluation using the Index of Congruence (IOC) Scoring system, producing scores between 0.66 and 1.

### **4.3 Data Collection**

#### **4.1 Participant Recruitment and Permission**

**Participant Selection:** Select participants from the three groups: parents, teachers, and potential kindergarten students based on their age and language ability.

**Obtain Permission:** Obtain official consent from the kindergarten administration to distribute questionnaires on the premises.

#### **4.2 Questionnaire Distribution**

##### ***Parents:***

- Administer questionnaires to parents during kindergarten gatherings or events.
- Place QR codes at the kindergarten entrance to enable access to the WeChat app-based survey.

##### ***Teachers:***

- Distribute questionnaires to teachers during scheduled faculty meetings.
- provide an electronic option for teachers to complete the survey to maximize participation.

##### ***Students (if applicable):***

- Administer questionnaires to selected students in a classroom setting, ensuring it aligns with their age and ability.

### **4.4 Data Analysis**

The collected survey data were analyzed. Quantitative data, such as Likert-scale responses, were subjected to descriptive statistics to understand the distribution of participants' opinions and attitudes. Frequency distributions and means and standard deviation were used to summarize the responses to closed-ended questions.

## 5. Research results

A comprehensive analysis of the challenges and needs inherent in kindergarten students' Chinese language learning is presented. A multi-dimensional approach has been applied to examine the perspectives of key stakeholders, including the students themselves, their teachers, and their parents. These findings illuminate the complex landscape of language acquisition at an early age and underscore the varying levels of challenges and needs experienced by each group. Notably, the students' strong desire for family engagement, the teachers' emphasis on fostering verbal communication skills, and the parents' focus on interactive learning materials emerge as significant themes. These insights collectively highlight the importance of developing a guidance handbook for family education tailored to kindergarten students' Chinese language learning needs, aiming to address these multifaceted challenges effectively. Some of the questions and results are presented below in the tables.

Table 1: Problems of Kindergarten Students' Chinese Language Learning from students', teachers' and parents' perspective.

Questions for Students	n=267		Level of problems
	$\bar{X}$	S.D.	
1. Remembering new Chinese words while studying at home is a difficulty for you.	4.56	0.35	Highest
2. You sometimes find it difficult to express yourself in Chinese within the classroom.	4.35	0.33	High
3. Some aspects of learning Chinese at home are confusing or challenging for you.	4.35	0.53	High
4. You sometimes feel overwhelmed when practicing Chinese at home.	2.10	0.35	Low
5. Integrating Chinese learning into your daily routine at home is sometimes difficult for you.	2.12	0.41	Low
<b>Total</b>	3.50	0.39	High
Questions for Teachers (n=50)			
1. Pronouncing Chinese words correctly during class appears to be challenging for students.	4.73	0.28	Highest
2. Certain students may struggle with understanding the meanings of Chinese characters.	4.67	0.39	Highest
3. Students generally find learning Chinese at school enjoyable and exciting.	4.63	0.22	Highest
4. Using Chinese language resources at home sometimes causes confusion for students.	3.48	0.21	Medium
5. Students occasionally struggle with communication in Chinese with family at home.	3.24	0.36	Medium
<b>Total</b>	4.15	0.29	High

<b>Questions For Parents (n=267)</b>			
1. Integrating Chinese learning into my child's daily routine at home is sometimes difficult for me.	4.71	0.48	Highest
2. Certain aspects of learning Chinese at home seem to be confusing or challenging for my child.	4.67	0.29	Highest
3. Remembering new Chinese words during home study is a difficulty for my child.	4.65	0.43	Highest
4. My child sometimes struggles with communication in Chinese with family at home.	2.97	0.36	Medium
5. Pronouncing Chinese words correctly during class is a challenge for my child.	2.10	0.51	Low
<b>Total</b>	<b>3.82</b>	<b>0.41</b>	<b>High</b>

From the students' viewpoint, the average problem score was 3.50, indicating a high level of difficulty. Notably, Question 1, dealing with remembering new Chinese words while studying at home, is identified as the most significant problem, with a mean score of 4.56. Conversely, the lowest level of problem pertains to Question 4, with students feeling overwhelmed while practicing Chinese at home, scoring 2.10, representing a low level of difficulty.

Looking at the teachers' perspective, the overall average problem score was 4.15, denoting a high level of difficulty. Their primary concern centers on Question 1, where students struggle with accurately pronouncing Chinese words in class, with a mean score of 4.73. In contrast, Question 5, concerning occasional communication issues in Chinese with family at home, is perceived as a medium-level problem with a mean score of 3.24.

From the parents' viewpoint, the overall average problem score is 3.82, indicating a high level of challenges. Parents' most substantial concern is found in Question 1, where they face the daunting task of seamlessly integrating Chinese learning into their child's daily routine, scoring an average of 4.71. On the other hand, Question 5, which relates to their child's difficulty in accurately enunciating Chinese words during class, is perceived as a low-level problem, with a mean score of 2.10.

In summary, the common thread across all perspectives is the high level of difficulty in kindergarten students' Chinese language learning. Pronunciation and integrating language learning into daily life with parents consistently emerge as a significant challenge. However, the specific issues and their intensities vary between students, teachers, and parents, emphasizing the need for tailored interventions to address these multifaceted problems, and guidance for busy parents on creating effective and efficient family study environments.

Table 2: Needs of Kindergarten Students' Chinese Language Learning from students', teachers' and parents' perspective.

Questions for Students	n=267		Level of needs
	$\bar{X}$	S.D.	
1. Having opportunities to speak and practice speaking Chinese with family members would be beneficial.	4.79	0.12	Highest
2. Using games or interactive apps to practice Chinese at home would make it more enjoyable.	4.72	0.53	Highest
3. Having additional practice materials for Chinese learning would aid your understanding.	4.69	0.18	Highest
4. Regular encouragement from your family to learn Chinese at home would motivate you.	4.10	0.34	High
5. Using visual aids like pictures or videos would enhance your understanding of Chinese.	3.24	0.41	Medium
<b>Total</b>	4.31.	0.32	High
<b>Questions for Teachers (n=50)</b>			
1. Providing opportunities for students to speak and practice speaking Chinese in class would be beneficial.	4.64	0.42	Highest
2. Incorporating interactive activities or games into Chinese lessons would engage students more effectively.	4.62	0.25	Highest
3. More interactive group activities focused on speaking Chinese would be valuable for students.	4.62	0.39	Highest
4. Encouraging parents to share in their child's progress and achievements in Chinese learning would foster motivation.	4.19	0.59	High
5. Regular feedback on students' progress would motivate them to learn more effectively.	4.18	0.23	High
<b>Total</b>	4.45	0.38	High
<b>Questions for Parents (n=267)</b>			
1. Recommending interactive learning materials or apps for Chinese study at home would be beneficial.	4.79	0.35	Highest
2. Offering strategies to help my child integrate Chinese language into daily activities would be beneficial.	4.77	0.34	Highest
3. Suggesting effective activities or strategies for supporting my child's Chinese learning at home would be valuable.	4.76	0.28	Highest
4. Recommending interactive learning materials or apps for Chinese study at home would be beneficial.	4.64	0.37	Highest
5. Encouraging regular practice of Chinese language skills at home would support my child's progress.	4.66	0.12	Highest
<b>Total</b>	3.82	0.41	High

From the perspective of kindergarten students, the overall needs in their Chinese language learning are characterized by an average score of 4.31, indicating a high level of requirements. Notably, students universally express a strong desire for opportunities to speak and practice Chinese with family members, reflecting a notably high mean score of 4.79. This underscores the pivotal role of familial engagement in language acquisition. Conversely, the lowest level of need pertains to the use of visual aids like pictures or videos to enhance their understanding of Chinese, reflected by a mean score of 3.24, categorizing it as a medium-level need.

When viewed from the standpoint of kindergarten teachers, the data reveals the distinct needs they have concerning support for students' Chinese language learning. The highest level of need is underscored by their emphasis on providing students with opportunities to engage in spoken Chinese practice within the classroom, as demonstrated by the mean score of 4.64. This highlights the crucial role of fostering verbal communication skills. In contrast, the lowest level of need pertains to the provision of regular feedback on students' progress to enhance their motivation to learn, reflected by a mean score of 4.18.

From the perspective of kindergarten parents, a comprehensive analysis of their Chinese language learning support needs shows an average score of 3.82, denoting a high level of requirements. Among the array of needs expressed, one specific area stands out as the most pressing concern, with Question 1 garnering a considerable mean score of 4.79. This particular query underscores the significance of recommending interactive learning materials or apps for Chinese study at home. This spotlight on the highest-rated value underscores the paramount importance of fostering an environment where Chinese language learning effortlessly intertwines with the daily routines and activities of kindergarten children.

In general analysis, these three perspectives collectively provide a comprehensive understanding of the diverse needs in kindergarten students' Chinese language learning. While students emphasize the importance of family involvement and practice, teachers highlight the significance of fostering verbal communication skills, and parents underscore the need for interactive learning materials at home. This diversity in needs underscores the complexity of addressing the multifaceted requirements of effective Chinese language learning support, necessitating general guidance for student to learn Chinese language efficiently.

### **5.3 A constructive handbook for home study of Chinese language for kindergarten students.**

This handbook is designed to support parents and caregivers in enhancing their child's Chinese language learning experience outside of the classroom. It's based on valuable insights from students, parents, and teachers, aiming to address common challenges and provide effective strategies for a holistic language learning journey.

The handbook consisted of nine units; namely, 1) Interactive learning 2) Effective practice 3) Guidance and explanations 4) Visual Aids 5) Speaking Opportunities 6) Feedback and motivation 7) Integration into daily life 8) Parental involvement 9) Positive environment. Each unit is cooperated with two to three suggested activities.

## **6. Discussion of the research result**

This study highlights the need for a Chinese language home study handbook for kindergarten students, as shown in research conducted at Beien Youyou Kindergarten in Chengdu, China. The study reveals that kindergarten students want more family involvement, teachers emphasize improving verbal skills, and parents stress interactive learning materials. These diverse needs emphasize the necessity of a guide to bridge educators and families.

While the study is specific to Beien Youyou Kindergarten, it underscores a universal need for kindergarten-level Chinese language guidance. This handbook could enhance language acquisition and communication skills, benefiting not only this kindergarten but also broader educational contexts.

In conclusion, our study underscores the importance of creating a comprehensive Chinese language home study handbook for kindergarten students and their families. This tool has the potential to address various challenges, foster collaboration among stakeholders, and improve Chinese language learning for kindergarteners worldwide.

## **7. Recommendations for Further Study**

in further research, it is recommended to investigate the implementation of tailored pedagogical approaches, such as adaptive learning methods, to address the specific challenges and needs identified in this study. Additionally, exploring the development and impact of student-centric feedback mechanisms, the cultivation of supportive parental engagement, and effective parent-teacher collaboration strategies can offer practical solutions to enhance the Chinese language learning experience for kindergarten students. Furthermore, the development and assessment of enriched learning resources and the integration of language learning into daily routines should be explored to translate the research findings into actionable measures for improving language education. These recommendations emphasize the application of research results to create a more effective and engaging learning environment.

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## **Developing Management Guidelines for Handling Problematic Academic Officials in Universities: A Case Study of Beijing University in China**

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### **ABSTRACT**

The objectives of this research were: 1) to investigate problems of problematic academic officials. 2) to investigate needs of problematic academic officials, and 3) to develop management guidelines for handling problematic academic officials. The respondents in this research were 100 teachers and 40 administrators obtained through stratified random sampling at Beijing University College as a case study. The research instrument employed in this study was a questionnaire with 30 questions for 5 rating scales and a set of questions for the online interview. The information and data collected were analyzed through the content analysis method and presented in terms of percentage, mean value, and standard deviation. The findings indicated that the problems and needs of handling academic officials at Beijing University in China are at the "highest" level, and the guidelines manual constructed are composed of nine units. All of the nine units were evaluated by three specialists and possessed the IOC values from 1.00 the guidelines manual was acceptable and could be used as a guideline manual for the handling academic officials at Beijing University in China.

**Keywords:** management guidelines, problematic academic Official

## 1. Background

High quality development is a new task facing higher education in China, and teaching quality is the key content of high-quality development in higher education. Improving teaching quality ultimately needs to be implemented by frontline teachers and in the specific classroom teaching process. In this context, university teachers have become the focus of attention in higher education reform. The teaching profession is a profession full of ethical colors, so the development of teaching profession is based on a solid ethical foundation, which involves qualities related to teaching practice such as equality, honesty, bravery, sympathy, and care (Wang, 2019).

The National Policy Board for Educational Administration (NPBEA, 2015) developed a set of standards for school leaders. The realm of this research falls with the domain of the leader being able to develop the professional capacity of school personnel primarily teachers whose classroom performance namely instruction, has been characterized as Problematic Academic Officials.

As mankind enters the twenty-first century, it enters the knowledge society and the information age. Knowledge replaces violence and wealth in the development of society and plays an absolute role in the development of society, and has become synonymous with social development, progress and strength. The competition among countries in the world is mainly a competition for comprehensive national strength, and in the final analysis, it is a competition for talents. How to cultivate high-quality talents has become the focus of attention for all countries in the world, and the basis for cultivating talents is education, and the basis for education is teachers; "the revitalization of the nation is education, and the revitalization of education is teachers." In a certain sense, the improvement of teachers' quality is directly related to whether

China's economic and social development in the 21st century can take the strategic initiative and meet the requirements of the knowledge economy, a strategic and fundamental issue. "To implement the strategy of strengthening the country with talents, we must first pay attention to teacher resources, and our country also attaches great importance to this point (Ministry of Education, 2019).

## 2. Research Objective

- (1) to investigate problems of problematic academic officials.
- (2) to investigate needs of problematic academic officials.
- (3) to develop management guidelines for handling problematic academic officials.

## 3. Review of Literature

### 3.1 Concept, Theories and Related Research

Lehmiller and others pointed out in their research theory that problematic means not being recognized and accepted, that is, those problematic groups often cannot be recognized and accepted by other members, that is, they are excluded (Lu, 2018). Many scholars equate problematic with exclusion, neglect, non-existence, non-centre, etc., and connect these concepts. At present, when problematic is defined, it is often identified as non-

central, non-mainstream or excluded, contrary to or opposite to mainstream culture, and not recognized by mainstream culture (Liu, 2016). Darling-Hammond (2013) in many ways refocused the term teacher quality as it “refers to strong instruction that enables as wide range of students to learn”(p.i), and this notion becomes even more important when teachers fail to perform in the classroom to the detriment of student success. In many fields such as behavior, management and education, it has promoted the formation of problematic theory(Liu, 2016). The problematic of teachers in this article means that in the field of education, compared with the status of teachers in other courses, problematic academic officials are in a state and status that are neglected, neglected or even excluded in teaching activities, and cannot be supported by schools, parents. Due to the sub-subject nature of the courses taught by problematic teachers, they are easily neglected, neglected, and rejected, and their role is greatly affected. The problematic of teachers includes many aspects, specifically covering the five aspects of problematic of existence, problematic of income, problematic of status, problematic of identity and problematic of development (Wu, 1997)." Problematic " is a concept in sociology, which was later extended to other fields, mainly to talk about the relationship between the mainstream and the tributaries(Li,2009).The edge is a concept relative to the center or the mainstream In a sense, the edge is decentralization, which implies inert, small, unimportant, and dispensable meanings. Problematic academic officials are a relative concept. As long as there is a group of teachers, there will be problematic teachers. Problematic teachers are dynamic. Problematic teachers in this article refer to (1) subjectively giving up competition, giving up the right to speak about school-related affairs, wandering on the fringes of the mainstream of the school, being content with the status quo, and making no effort; , it is difficult to get respect from the 'industry', and even the situation is difficult. They are on the verge of curriculum reform and are ignored by leaders and colleagues. (3) They have more than 5 years of teaching experience and only undertake teaching tasks. They are neither class teachers nor hold any administrative positions. They have not received any rewards (including school-level) within two years. There is no opportunity for training above the school level. Li Xiaomin (2013) believes that there are many factors affecting the problematic of teachers, mainly in the ability of teachers themselves, the degree of emphasis on education in schools, and the social environment, which prevent teachers from being valued and recognized, resulting in problematic of teachers.Rao Feiling (2014) conducted a qualitative research on teachers in rural small-scale schools and found that theproblematicof small-scale teachers is reflected in four parts: teacher structure, teacher daily life, student management and professional development. Suo Changqing (2013) believed that the problematic of teachers has many aspects, mainly including gender distinction, roles and teaching effectiveness. This leads to the problematic of teachers.

### 3.2 Conceptual Framework

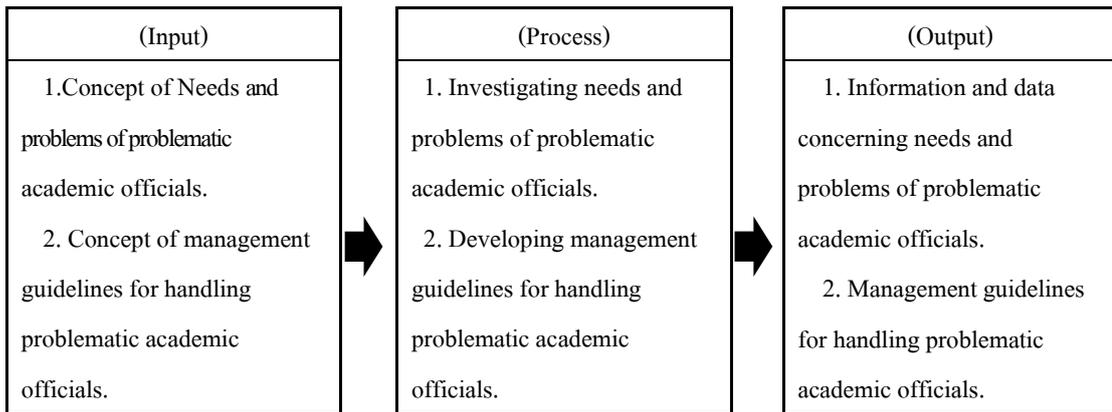


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population and Sample

#### 1) Population

The population in this research project, Beijing University will be used as a case study. In this research was divided into 2 groups, namely, 1) 400 teachers and 2) 40 administrators.

#### 2) Samples groups

In this research project use random sampling method and the sample groups was divided into 2 groups, namely, 1) 100 teachers (used Yamane, 1973 sample size estimation) and 2) 40 administrators.

### 4.2 Research Instrument

1) Questionnaire: In this research project, a questionnaire was employed for the data collection. The questionnaire will be divided into 2 types; namely, 1) the questionnaire for management team, and 2) the questionnaire for teachers. The questionnaire was divided into 3 sections, which are 1) general information, 2) problems of problematic academic officials, and 3) needs of problematic academic officials. The questionnaire will be evaluated for the Index of Congruence scores (IOC index) by the three specialists. The questions in the questionnaire evaluated between the range of IOC 0.67 to 1.00 was employed in this research. Reliability index was evaluated by Cronbachs' Alpha Coefficient (Cronbach, 1984).

2) A set of questions for the online interview. There are 5 teachers and 5 administrators to construct a guideline manual for handling problematic academic officials. The construction guideline manual will be evaluated by the three specialists (one Thai professor and two Chinese native speakers), Moreover, the answer from the specialists would give comments concerning the correctness and suitability of the handbook, the results then will be presented in terms of IOC (Index of Congruence).

### 4.3 Data Collection

In this research, the researcher collected the data from the sample groups online via emailing. The researcher submitted a letter of permission to the school director in advance to ask a permission to collect the data and information from the samples group at Beijing University.

#### 4.4 Data Analysis

1) The Data was analyzed, interpreted and then presented in terms of frequency, percentage, mean ( $\bar{X}$ ), and standard deviation (S.D.). The five point Likert rating scale was used to evaluate the respondents' problems of living situation of problematic academic officials and analyze the reasons for their formation.

The criteria and define at the range of the mean scores as the following:

4.51-5.00 = the highest level of problems

3.51-4.50= the high level of problems

2.51-3.50= the moderate level of problems

1.51-2.50= the low level of problems

1.00-1.50= the lowest level of problems

2) The ideas and comments obtained from the focus group discussion meeting, were analyzed and then used to correct and improved the contents of the guideline.

### 5. Research Result

#### 5.1 Administrators' Problems and needs in problematic academic officials

Table 1: Administrators' Problems and Needs in problematic academic officials

Questions	n=40		Level of problems and needs
	$\bar{X}$	S.D.	
<b>Problems</b>			
1. No voice in school management.	4.73	0.28	Highest
2. There are not many opportunities to participate in research projects	4.73	0.29	Highest
3. I am currently short of funds to purchase a house.	4.70	0.20	Highest
4. I think the school's reward and evaluation system is unreasonable.	4.53	0.26	Highest
5. My job is not stable.	4.53	0.27	Highest
Total	4.60	0.24	Highest
<b>Needs</b>			
1. I think a high salary is essential.	4.73	0.25	Highest
2. I think it's essential to participate in research on the subject.	4.72	0.29	Highest
3. I think a school management system is essential.	4.66	0.27	Highest
4. I need a good state of mental health.	4.50	0.20	High
5. I need to have a say in the running of the school.	4.52	0.21	Highest
Total	4.61	0.24	Highest

According to this table, 1) administrators gave high-level ratings of the living conditions and management strategy issues of problematic academic officials. The Administrators' Problems and Needs in problematic academic officials results shown as table, the average scores are  $(\bar{X}) = 4.60$ , S.D.=0.24) and  $(\bar{X}) = 4.61$ , S.D.=0.24.

**5.2 Teachers' Problems and Needs in problematic academic officials**

Table 2 : Teachers' Problems and Needs in problematic academic officials

Questions	n=100		Level of problems and needs
	$\bar{X}$	S.D.	
<b>Problems</b>			
1. I am not satisfied with the current welfare benefits	4.68	0.28	Highest
2. There are not many opportunities to go out and participate in continuing education	4.67	0.26	Highest
3. I think my living environment is difficult.	4.66	0.28	Highest
4. There are not many opportunities to participate in research projects.	4.5	0.25	High
5. My current job is mentally stressful.	4.51	0.28	Highest
Total	4.59	0.25	Highest
<b>Needs</b>			
1. I think a school benefits package is essential.	4.73	0.25	Highest
2. I think a school management system is essential.	4.66	0.27	Highest
3. I think it's essential to take continuing education courses.	4.66	0.26	Highest
4. I need a good state of mental health.	4.5	0.23	High
5. I think a happy work environment is essential.	4.51	0.2	Highest
Total	4.58	0.23	Highest

According to this table, 1) it is indicated the teachers rated the problems of the problematic academic officials at the high level. Firstly, most teachers indicate that not satisfied with the current welfare benefits with average score  $(\bar{X}) = 4.68$ , S.D. =0.28. 2) it is indicated the teachers rated the needs of problematic academic officials at the high level. Finally, most teachers indicate that school benefits package is essential with average score  $(\bar{X}) = 4.73$ , S.D. =0.25.

**5.3 The development of management guidelines for handling problematic academic officials**

A guideline manual including nine units, namely: 1) Introduction to Handling Problematic Academic Officials 2) Common Problems Among Academic Officials 3) Addressing Issues Related to Lack of Voice in School Management 4) Tackling Job Insecurity 5) Resolving Dissatisfaction Among Teachers 6) Promoting Research Opportunities 7) Fulfilling the Needs of Teachers 8) Meeting the Needs of Administrators 9) Conclusion and Continuous Improvement. Each unit is composed of two sub units and each unit and sub unit involved with specific information, examples, and University-specific details. All the nine units evaluated by the three

specialists( One Thai professors and two senior administrators ) in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All nine units were evaluated and possessed the IOC values is 1.00 meaning the developed the guideline manual for problematic academic officials was acceptable and could be used as a guideline manual to supporting problematic academic officials in Beijing University and develop strategic management of problematic academic officials.

## **6. Discussion of the Research Result**

The findings from the investigation of problematic academic officials in universities and strategies of problematic academic officials in Beijing University which is in the responsible area of Beijing University in terms of concept and living conditions of were all in the “highest” level indicating that the concept of problematic academic officials and living conditions in the mismanagement level. It is correspondents with the American sociologist Parker introduced the concept of problem which refers to the disparity between tradition and modernization during the process of societal transition due to inadequate social integration of values, beliefs, and actions, leading to exclusion from political, economic, and cultural systems (Jiang, 1992). Moreover, Lehmillier and other researchers have highlighted that problematic involves a lack of recognition and acceptance, often leading to exclusion from the broader community (Lu, 2018). Building upon these concepts, the thesis effectively identifies problematic academic officials as a distinct group within Jiangsu University, delineating specific criteria such as limited recognition, restricted career advancement opportunities, and insufficient access to training and rewards. This clear definition of problematic academic officials lays the groundwork for comprehending the unique challenges they encounter within the University setting. Secondly, the research findings reveal the living conditions of problematic academic officials at Beijing University. These conditions may include lower economic income, inadequate access to professional development opportunities, and limited participation in decision-making processes within the institution. The study effectively highlights the factors that contribute to the problematic of this group and emphasizes the need for tailored interventions to address their specific needs. In conclusion, the thesis "Research on Living Situation and Management Strategies of Problematic academic offiaials. A Case Study of Beijing University" sheds light on the challenges faced by problematic academic officials in a University setting. The research results provide valuable insights for developing targeted interventions and policies to promote the well-being and professional growth of educators within the institution. By addressing the factors that contribute to problematic and implementing effective management strategies, Beijing University can work towards creating a more inclusive and supportive environment for all its teachers.

## 7. Recommendations for Further Study

(1) A research on the evaluation towards for effectiveness for the guideline manual for the problematic academic officials in Beijing must be executed.

(2) A research of improve the management of teaching skills and professional development of the problematic academic officials in Beijing must be executed.

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## **Developing Strategic Guidelines to Enhance Chinese Language Learning of Students in Primary Schools: a Case Study of Haibin School in Chengdu, China**

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### **ABSTRACT**

The objectives of this study are: 1) to investigate the problems of enhancing the learning Chinese language of students in primary schools, 2) to investigate the needs to enhance the learning Chinese Language of students in primary schools, and 3) to develop a guidebook for the enhance the learning Chinese language of students in primary schools. The respondents of this study were divided into two groups which are 240 students and 30 teachers/administrators obtained through a stratified random sampling technique. Chengdu Haibin primary school was used as an example. The research instruments used in this study were 1) a questionnaire with 20 questions with 4 rating scales, and 2) a set of questions from 3 focus group discussions. The information from data collection process were analyzed and presented in form of frequenc, percentages, means and standard deviations. The results of the study showed that the problem of enhancing Chinese language learning among primary school students was rated as the "highest level". The preparation of the Management Guidebook for Enhancing Chinese Language Learning consists of six units: 1) Spring, Summer, Autumn and Winter; 2) Surname Songs; 3) Little Frog; 4) Character Puzzles; 5) Oral Communication; and 6) Language Garden; the correctness and applicability of the contents of the six units have been evaluated and approved by the experts (a Thai professor and two native Chinese speakers) and ended with a value of IOC (0.66 to 1.0). This indicates that the strategy approach is acceptable and can be used to evaluate the enhance the learning Chinese language management

handbook for primary school Students and improve the enhance the learning Chinese language of students in primary schools.

**Keywords:** Strategic guidelines, enhancing the Chinese language learning, primary school students

## 1. Background

Language teaching has an irreplaceable advantage in improving students' comprehension and language ability and has the function of driving students' learning in other subjects. (Yang Fafu 2019) Cultivation of language literacy is a long-term, persistent process, which is formed by continuous efforts and persistent exercise in later life. . (Yu Hua 2022) Students in the first grade of elementary school have limited literacy and must be careful in choosing what to read. (Wang Yuanyuan 2019) Therefore, the learning of basic Chinese language courses is far from enough.

## 2. Objectives

- (1) To investigate problems of Chinese language teaching.
- (2) To investigate needs of primary school students in Chinese language learning.
- (3) To develop strategic guidelines to enhance the Chinese language learning of students in primary school

## 3. Literature Review

### 3.1 Theory, Concept and Related Research

It is increasingly recognized that the elementary school stage is an essential stage for students to lay the foundation of language and Chinese characters are not only a tool for language, language learning and record-keeping, but also an important medium for the inheritance and development of excellent traditional culture. (Yang Jinwang 2020). It is necessary to strengthen the cultivation of their basic Chinese language ability, fully mobilize students' interest in learning in the process of teaching the Chinese language and lay the foundation for the improvement of their learning ability. (Ma Guanghui 2021). Teaching Chinese characters is an important part of language teaching and a basic module, which has an important influence on the formation of students' language literacy. (Feng Xiang, Geng Lina, 2023). Hanyu Pinyin is a boring and abstract symbol, which is the foundation of language learning for primary school students. It is the bridge for children to know the world, and learning Pinyin well will benefit them for a lifetime. (Yin Wencai 2018)

### 3.2 Conceptual Framework

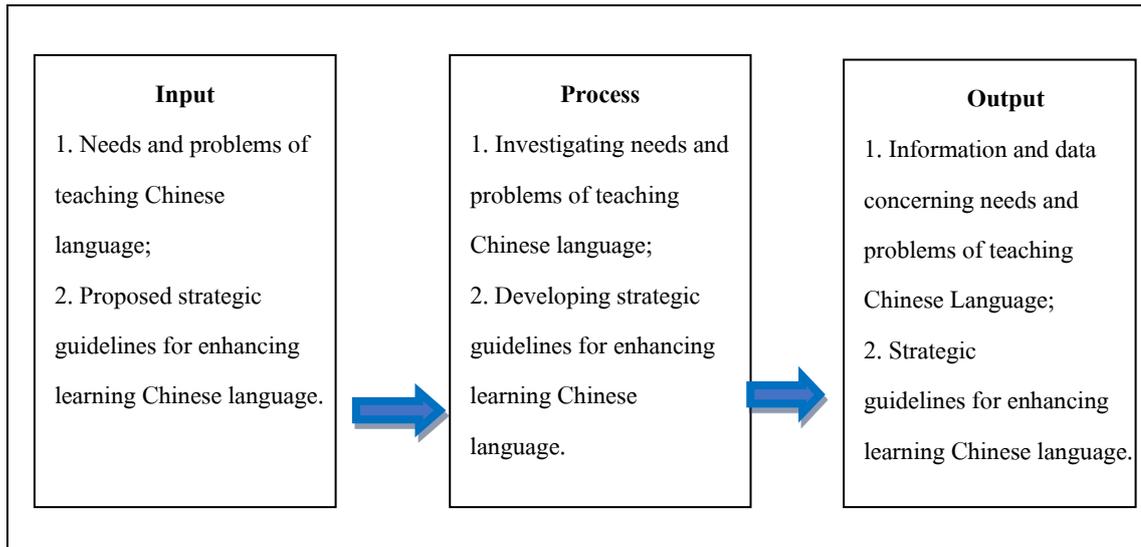


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population/Sample groups

The research population of this research project is Haibin School in Chengdu. The research population of this research project was 2 groups, namely: 1) 600 primary school students who participated in Chinese language teaching in 2021, and 98 Chinese teachers

### 4.2 Research Instruments

In this research project, a questionnaire will be employed for the data collection.

### 4.3 Data Collection

In this research, the researcher collected the data from the sample groups online via email. The researcher submitted a letter of permission to the school director in advance to ask permission to collect the data from the sample group at Haibin School in Chengdu, China.

### 4.4 Data Analysis

The data was analyzed, interpreted, and then presented in terms of frequencies, percentages, means ( $\bar{X}$ ), and standard deviations (S.D.). The Five Point Likert Rating Scale was used to evaluate the respondents' needs and problems of primary school students Learning the Chinese Language.

## 5. Research results

### 5.1 Needs of primary school students in Chinese language learning

Table 1: Needs of primary school students in Chinese language learning in the opinions of students

Questions	n=240		Level of Needs
	$\bar{X}$	S.D.	
1. You think learning Chinese is difficult	4.66	0.43	Highest
2. You are confident in learning Chinese	4.57	0.68	Highest
3. You have interest in learning Chinese.	4.55	0.39	Highest
4. You think learning Chinese is important.	4.65	0.44	Highest
5. Chinese courses are rich in resources and materials but easy to connect.	4.59	0.37	Highest
6. You will actively read books in Chinese.	4.66	0.46	Highest
7. When teaching Chinese, you are willing to participate in learning.	4.63	0.26	Highest
8. After class, you are very active in completing your homework.	4.65	0.85	Highest
9. You will actively complete your Chinese prep assignments.	4.56	0.33	Highest
10. You think hard in Chinese class.	4.60	0.42	Highest
Total	4.60	0.44	Highest

According to table 1, it is indicated that needs of primary school students' learning Chinese language from the highest level with average score of 4.60 (S.D=0.44).

### 5.2 Problems of enhance the learning Chinese for primary school students skills opinions of students

Table 2: Problems of Enhance the Learning Chinese for Primary School Students skills opinions of students

Questions	n=240		Level of problems
	$\bar{X}$	S.D.	
1. You think it's hard to learn Chinese.	4.63	0.55	Highest
2. You are not confident in learning Chinese.	4.60	0.30	Highest
3. You have no interest in learning Chinese.	4.62	0.54	Highest
4. You don't think learning Chinese is important.	4.52	0.49	Highest
5. Chinese courses are rich in resources and materials but difficult to connect.	4.68	0.53	Highest
6. You don't actively read books in Chinese.	4.66	0.50	Highest
7. When teaching Chinese, you are not willing to participate in learning.	4.57	0.24	Highest
8. After class, you won't finish your homework.	4.56	0.23	Highest
9. You won't finish your Chinese prep work.	4.56	0.26	Highest
10. You don't think seriously in Chinese class.	4.55	0.42	Highest
Total	4.59	0.40	Highest

According to table 2, it is indicated that problems of primary school students' learn Chinese language from the highest levels with average score of 4.59 (S.D=0.40).

5.3 Needs of enhance the primary school students' learn Chinese language skill opinions of Teachers

Table 3: Needs of Enhance the primary school students' learn Chinese language skill opinions of Teachers

Questions	n=30		Level of needs
	$\bar{X}$	S.D.	
1. Teachers can learn some skills to participate in students' learning Chinese language	4.55	0.54	Highest
2. Teachers can spare some time to participate in students' learning Chinese language	4.67	0.55	Highest
3. Teachers can check students' reading- Chinese related homework	4.56	0.33	Highest
4. Teachers can help with content that students do not understand in class	4.54	0.64	Highest
5. Teachers can take the initiative to motivate students to learning Chinese language	4.54	0.25	Highest
6. Teachers should monitor students' Chinese regularly	4.66	0.42	Highest
You believe that appropriate teachers encouragement can promote students' learning Chinese language.	4.55	0.31	Highest
8. Teachers can regularly check the results of their students' Chinese	4.56	0.59	Highest
9. You hope that teachers can take students to Chinese language -related places regularly	4.52	0.46	Highest
10. You hope that teachers can actively participate in the learning Chinese language activities organized by the school	4.60	0.65	Highest
Total	4.58	0.45	Highest

According to table 3, it is indicated that needs of primary school students' learning Chinese language from the perspective of teachers are at the highest levels with average score of 4.58 (S.D=0.45).

5.4 Problems of enhance the primary school students' learn Chinese language skill opinions of Teachers

Table 4: Problems of Enhance the primary school students' learn Chinese language skill opinions of Teachers

Questions	n=30		Level of problems
	$\bar{X}$	S.D.	
1. You do not think teachers are capable of guiding students in learning Chinese language	4.52	0.24	Highest
2. You do not think teachers have enough time to be involved in students' learning Chinese language	4.56	0.35	Highest
3. Teachers are too dependent on the school when it comes to students' learning Chinese language	4.56	0.29	Highest
4. Teachers are too expectant when it comes to student learning Chinese language	4.58	0.40	Highest
5. The learning Chinese language atmosphere at home is not strong	4.66	0.33	Highest
6. Teachers do not pay enough attention to students' learning Chinese language	4.65	0.87	Highest
7. Teachers' involvement lacks scientificity and effectiveness	4.55	0.38	Highest
8. Teachers are not very motivated to participate in school learning Chinese language activities	4.56	0.43	Highest
9. Students do not fully understand the content in the classroom	4.55	0.36	Highest
10. Students have not formed good learning Chinese language habits	4.58	0.45	Highest
Total	4.57	0.39	Highest

According to table 4, it is indicated that problems of primary school students' learning Chinese language from the perspective of teachers are at the highest level with average score of 4.57 (S.D=0.39).

Enhance Chinese language learning for primary school students Guide Manual six units, six units from the highest score of the Student and Teacher Needs Questionnaire, student needs have six highest score needs, teachers have six highest score needs. therefore, the twelve highest score needs of students and teachers are integrated into nine highest score needs, becoming the six units of the " enhance Chinese language learning for primary school students", namely,: 1) Spring, Summer, Autumn and Winter, 2) Surname Songs, 3) Little Frog, 4) Character Puzzles, 5) Oral Communication, and 6) Language Garden. Six units were assessed by three experts (one Thai professor and two native Chinese speakers) based on the correctness and applicability of the content and presented in IOC (Congruence Index) values. All six units were evaluated with IOC values ranging from 0.66 to 1.0, which means that the developed strategy guide to enhance Chinese language learning for primary school students is acceptable and can be used as a strategy guide for Chinese language learning practices to enhance Chinese language learning for primary school students.

5.5 The Index of Congruence (IOC) of the six units in terms of correctness and suitability of the contents.

Table 5.5 The Index of Congruence (IOC) of the six units in terms of correctness and suitability of the contents.

Topics/Contents	IOC
Unit 1: Spring, Summer, Autumn and Winter	
Introduction	1.00
Chinese Skills Practice & Questions	0.66
Extended Reading	1.0
Unit 2: Surname Songs	
Introduction	0.66
Chinese Skills Practice & Questions	1.00
Extended Reading	1.00
Unit 3: Little Frog	
Introduction	1.00
Chinese Skills Practice & Questions	0.66
Extended Reading	1.00
Unit 4: Character Puzzles	
Introduction	1.00
Chinese Skills Practice & Questions	0.66
Extended Reading	1.00
Unit 5: Oral Communication	
Introduction	0.66
Chinese Skills Practice & Questions	1.00
Extended Reading	1.00
Unit 6: Language Garden	
Introduction	1.00
Chinese Skills Practice & Questions	0.66
Extended Reading	1.00

According to Table 5.5, all six units assessed by three experts (one Thai professor and two native Chinese speakers) in terms of correctness and applicability of the content are presented in IOC (Congruence Index) values. All 6 units found 0.66 or higher, which means that the developed strategy guide to enhance Chinese language learning for primary school students is acceptable and can be used as a strategy guide for Chinese language learning practices to enhance Chinese language learning for primary school students.

## 6. Discussion of the Research Results

Needs and problems of enhancing the Chinese language learning of students in primary schools skills from the perspective of students and teachers which is in the reliable area in Haibin Primary School in Chengdu, China. The overall findings in this research found that needs and problems of enhancing the learning Chinese language of students in primary schools were all in the "Highest" level, respectively ( $\bar{X}=4.60$ , S.D.=0.44), ( $\bar{X}=4.59$ , S.D.=0.40) from the perspective of students and ( $\bar{X}=4.58$ , S.D.=0.45), ( $\bar{X}=4.57$ , S.D.=0.39) from the perspective of teachers, indicating that students have great needs of teachers' guidance and there are many problems in involving primary school.

## 7. Recommendations for Further Studys

1) A research on the evaluation of effectiveness for the strategic guidance of enhancing the Chinese language learning of students in primary schools skills in Haibin Primary school in Chengdu, China must be executed.

2) A research on factors affecting the competence of primary school students' Chinese Language learning in Chengdu must be executed.

## 8. Ackowlegenment

At the outset, I would like to express my sincerest gratitude to my thesis supervisors, Dr. Uswin Chaiwiwat and Dr. Pakanat Chantanawaronont Sompongdam, whose professional guidance, encouragement and good will have been a great source of inspiration to me throughout the process of writing this thesis. Without their persistent help, it would not have been possible to complete this thesis. Secondly, I would like to thank Dr. Araya Ariya, Chairperson of the Dissertation defense committee, who provided me with extensive professional guidance and I learned a lot from her detailed comments and suggestions. I would also like to give special thanks to Dr Kris Phattaraphakin who taught me a lot about educational research and helped me endlessly in the use of statistics.

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**A Development of a Strategic Guideline to Enhance the Learning Achievement  
for the Young Orphans in Rural Areas of China: A Case Study of  
DA LUN Primary School in Jiang Su, China**

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**ABSTRACT**

The objectives of this research were: 1) to investigate problems of the enhancement of the learning achievement of young orphans in Rural Areas of China, 2) to explore needs of the enhancement of learning achievement for young orphans in Rural Areas of China. 3) To construct a strategic guideline to enhance learning achievement for young orphans in Rural Areas of China. The respondents in this research were 100 students' parents and 30 teachers obtained through stratified random sampling at DA LUN Primary School as a case study. The research instruments employed in this study were questionnaires with 32 questions for 8 rating scales. The data were analyzed through the content analysis method and presented in terms of percentage, means, and standard deviations. The findings indicated that: 1) problems in overcoming psychological disturbances in improving orphans' academic performance and orphans need the support of their mother's love to improve their academic performance were all in the "Highest" level, 2) to construct a strategic guideline of enhance the learning

achievement for young orphans in Rural Areas of China comprises of eight units. All of the eight units were evaluated by the 3 specialists and possessed the IOC values from 0.66 to 1.0 meaning a development of enhance learning achievement for the young orphans in Rural Areas strategic guideline was acceptable and could be used as a manual for orphans' academic performance for teachers and parents of students in Dalun Primary School in order to improve the academic performance of young orphans in rural China.

**Keywords:** Strategic Guideline, Academic Achievement, Da Lun Primary School.

## 1. Background

The issue of orphans has always been a serious social problem, especially in rural areas of China. As a result of family break-ups, poverty and other reasons, they have lost parental support and care and face many difficulties and challenges, one of which is education. Rural orphans face low academic performance and high dropout rates, which create huge obstacles to their future development and social integration. Improving the academic performance of rural orphans in China is important for achieving educational equity and rural development. Since academic performance is directly related to children's learning experience, mental state, and future development opportunities, improving the academic performance of rural orphans means providing them with better educational resources and opportunities, and promoting the development of their full potential and equal educational and life opportunities. The author, as a staff member of DA LUN Township Government in Jiangsu Province, took DA LUN Primary School in Jiang Su as an example, and divided the population and samples in this research into two groups: 1) 100 students' Parents and 2) 30 teachers. It was found that there are the following in the learning of rural orphans Problems: 1) lack of educational resources in rural areas, the generally low quality of schools and teachers, and the lack of effective teaching methodology and resources to support them. 2) rural orphans do not have a good learning environment and often face economic difficulties, as they do not have the financial support of their families. 3) rural orphans lack parental care and psychological stress, and most of them are not psychologically healthy enough, and these problems affect the academic performance of rural orphans. Therefore, the purpose of this research is to explore how to improve the academic performance of rural orphans in China. By studying and analyzing relevant literature and empirical studies, and taking into account the real situation, targeted suggestions and measures are proposed to solve the problem. This will help to understand the nature and key factors of the educational problems of rural orphans and provide a theoretical and practical basis for the development of targeted educational policies and measures. Based on research and practical experience, a manual for improving the academic performance of Chinese rural orphans can be developed, which consists of eight units, namely: first, strengthening psychological support and emotional management for rural orphans. Rural orphans face great psychological pressure and distress, and need psychological support and emotional management from the society and schools so that they can study at ease and improve their academic performance. Second, provide quality educational resources and opportunities. increase investment in education in rural areas and improve school infrastructure and teaching staff. Introduce new

teaching methods and technologies and provide diversified educational resources, including libraries, computers and the Internet. Third, strengthen family and social support. A comprehensive social assistance system should be set up to provide financial assistance and child welfare services. At the same time, strengthen the role of community organizations and volunteers to provide psychological support and care. Fourth, cultivate good study habits and independent learning skills. Through training in learning methods and study skills, help rural orphans establish correct learning attitudes and methods, and improve their independent learning ability and motivation. Fifth, strengthening education publicity and awareness-raising. By widely publicizing the importance of education, rural families and communities will be made more aware of and pay more attention to education, and a good learning atmosphere will be created. Sixth, establish cooperative mechanisms and cross-sectoral collaboration. The government, schools, social organizations and other parties should form a cooperative mechanism to work together to improve the academic performance of rural orphans. Information sharing and resource integration should be strengthened to ensure the effective integration and synergy of all parties. Through the research in this thesis, we hope to provide useful insights and guidance for improving the academic performance of rural orphans in China, to promote equity in rural education, and to create better conditions for the growth and future development of rural orphans.

## **2. Objectives**

1. To investigate problem of the enhancement of learning achievement for young orphans in Rural Areas of China.
2. To explore needs of the enhancement of learning achievement for young orphans in Rural Areas of China.
3. To develop a strategic guideline of enhance learning achievement for young orphans in Rural Areas of China.

## **3. Review of Literature**

### **3.1 Concepts/Theories/Related Research**

Equity in education: (Ainscow, 2020). Equity in education means that every individual has equal rights and opportunities in terms of access to education and distribution of resources. It emphasizes that regardless of an individual's origin, gender, socio-economic status, physical condition or other characteristics, everyone should have an equal opportunity to obtain a high-quality education, to develop their full personal potential and to achieve their life goals. Rural development: (Clausen & Rudolph, 2020). Rural development refers to the progress and improvement of rural areas in terms of economic, social, infrastructure, agricultural production, education and health care. Educational resources: (Daniel, 2020). They are resources that are utilized and developed by schools, educational institutions and social organizations in order to provide quality education. Proper allocation and effective utilization of educational resources are essential for the provision of quality education. They can help to raise the level of students' learning achievement, knowledge and skills, and promote lifelong learning and personal

development. Teaching Methodology: (Tursunovich,2022). The selection of teaching methods should be flexibly adjusted according to the teaching objectives, students' characteristics and teaching contents. An effective teaching method should be able to stimulate students' interest and enthusiasm in learning, cultivate their thinking and problem-solving abilities, and promote their overall development. Mother's Love: (Goldstein, 2021). Mother's love encompasses many aspects of warmth, care, protection and devotion, and is a deep emotional bond that provides the support and motivation a child needs to thrive. One of the most basic expressions of mother's love is the endless love and care that a mother gives to her child. Mother's love also involves unconditional acceptance and understanding, as mothers are willing to listen to their children and give them comfort and peace of mind. Through their love and attention, mothers provide their children with the warmth, security and environment they need to thrive, helping them to develop a good emotional connection and develop their potential.

### 3.2 Conceptual Framework

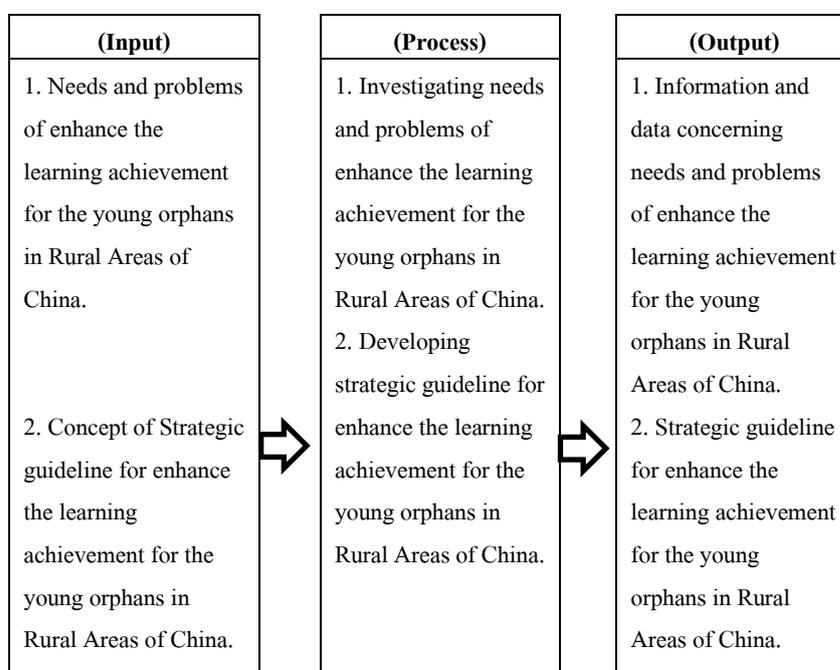


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population/Sample groups

In this research, DA LUN primary school in Jiang Su, China was used as a case study. The population and sample group were obtained from teachers throughout the school and from parents of children with special needs throughout the school. The sample in this study will be divided into 2 groups; 1) 100 students' Parents and 2) 30 teachers

### 4.2 Research Instruments

1) Questionnaires: In this research, a questionnaire was employed for the data collection. The questionnaire was 3 parts sections: 1) general information, 2) needs for enhance the learning achievement for the

young orphans in rural areas of China. and 3) Problems in enhance learning achievement for young orphans in Rural Areas of China. The questionnaires were evaluated and approved in terms of correction suitability via the Index of Congruence scores by three specialists. Each question in the questionnaire must be evaluated with the range of IOC 0.66 to 1.00.

2) A set of questions for the online focus group discussion meetings to gain ideas comments for the construction of the guideline handbook for academic achievement for young orphans in rural China. The construction strategic guideline was evaluated by the three specialists (one Thai professor and two Chinese native speakers), Moreover, the answer from the specialists would give comments concerning the correctness and suitability of the strategic guideline, the results then will be presented in terms of IOC (Index of Congruence).

#### 4.3 Data Collection

In this research, the researcher submitted a permission letter in advance to the school asking permission to collect data and information from the sample group of DA LUN primary school in Jiang Su, China. The researcher collected the data and information online via email.

#### 4.4 Data Analysis

The collected information and data contents will be analyzed and then expressed in terms of frequency counts and percentage, mean ( $\bar{X}$ ), standard deviation (S.D.)

### 5. Research Results

#### 5.1 Problem of enhance the learning achievement for the young orphans in Rural Areas of China

Table1: Problems of enhance the learning achievement for the young orphans in Rural Areas of China

Questions	n=100 (students' parents)		Level of problems	n=30 (teachers)		Level of problems
	$\bar{X}$	S. D		$\bar{X}$	S. D	
1. Problems in overcoming psychological disturbances in improving orphans' academic performance.	4.55	0.29	Highest	4.55	0.29	Highest
2. The problem of economic support for orphans to improve their academic performance.	4.53	0.28	Highest	4.55	0.21	Highest
3. The problem of socializing skills for orphans to improve their academic performance.	4.54	0.31	Highest	4.48	0.31	Highest
4. The problem of improving the educational environment for orphans in rural China to improve their academic performance.	4.45	0.29	High	4.49	0.26	High
5. The problem of mother's love for orphans to improve their academic performance.	4.47	0.28	High	4.43	0.31	High
Total	4.50	0.29	High	4.51	0.29	Highest

According to table 1, problems of enhance learning achievement for young orphans in Rural Areas of China all need to be addressed. Most are at the highest level. In the students' Parents sample group, The highest value of 1 is 4.55, the lowest is 4.45, the mean is 4.50 and the S.D. mean is 0.29 In the teachers sample group, The highest value of 2 is 4.55, the lowest is 4.43, the mean is 4.51 and the S.D. mean is 0.29. Articles 1, 2, and 3 have the highest values of problems to be solved, indicating that there are problems from the psychological aspect, the economic aspect, and the teaching faculty.

**5.2 Needs of enhance the learning achievement for the young orphans in Rural Areas of China**

Table2: The needs of enhance the learning achievement for the young orphans in Rural Areas of China

Questions	n=100 (students' parents)		Level of needs	n=30 (teachers)		Level of needs
	$\bar{X}$	S. D		$\bar{X}$	S. D	
1. Orphans need economic support to improve their academic performance.	4.54	0.29	Highest	4.61	0.28	Highest
2. Orphans need the support of a father's love to improve their academic performance.	4.56	0.25	Highest	4.55	0.29	Highest
3. Orphans need the support of their mother's love to improve their academic performance.	4.59	0.24	Highest	4.60	0.33	Highest
4. Orphans need livelihood support and assistance to improve their academic performance.	4.45	0.29	High	4.43	0.28	High
5. Orphans need to improve their social skills to improve their academic performance.	4.49	0.29	High	4.45	0.31	High
Total	4.51	0.28	Highest	4.52	0.30	Highest

According to table 2, needs of enhance the learning achievement for the young orphans in rural areas of China all need to be addressed. Most are at the highest level. In the students' Parents sample group, the highest value of 1 is 4.59, the lowest is 4.45, the mean is 4.51 and the S.D. mean is 0.28. In the teachers' sample group, the highest value of 2 is 4.60, the lowest is 4.43, the mean is 4.52 and the S.D. mean is 0.30. The highest value of need is found in articles 1, 2and 3, which indicates the existence of need in terms of psychological pressure from the economic aspect, fatherly aspect and motherly aspect.

**5.3 strategic guideline of enhance the learning achievement for the young orphans in Rural Areas of China**

A strategic guideline including eight units: unit1, problems in overcoming psychological disturbances in improving orphans' academic performance; unit 2 problems of economic support for orphans to improve their academic performance; unit 3 problems of teaching aids for orphans to improve their academic performance; unit 4 orphans need economic support to improve their academic performance; unit 5 orphans need the support of a

father's love to improve their academic performance; unit 6 orphans need the support of their mother's love to improve their academic performance; unit 7 orphans need attention and support from all sectors of society; unit 8 The impact of good teachers on orphans. All the eight units evaluated by the three specialists (One Thai professors and two English native speakers) in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All eight units were evaluated and possessed the IOC values from 0.66 to 1.0 meaning the developed strategic guideline for the enhancement of construct a strategic guideline of enhance learning achievement for young orphans in rural areas of China was acceptable and could be used as construct a strategic guideline of enhance the learning achievement for the young orphans in Rural Areas of DALUN Primary School in Jiang Su.

The guideline of enhancing learning achievement for young orphans in Rural areas of China. approved by three experts (one Thai and two Chinese professors) and scored by the Index of Consistency (IOC) and the eight units proposed by the International Olympic Committee (consistency index) are 1.00. This means that this strategic guideline is acceptable and can be used to improve the academic performance of orphans.

## **6. Discussion of the Research Results**

The findings from the investigation of a strategic guideline of enhance learning achievement for young orphans in rural areas of China problems and needs of enhance the learning achievement for the young orphans in rural areas of China of Most of them are in "Highest" level in the educational levels. In particular, the problems and needs in the areas of economy, psychological pressure, teacher teaching and parental care are the highest. The researcher conducted these aspects as a strategic guideline of enhancing learning achievement for the young orphans in Rural Areas of China.,1) mental health of orphans is a big problem and only by addressing their mental illnesses, they can learn better. This is similar to Karfe., & Matsayi, (2019). Scholars' findings.2) Lack of teachers and poor teaching methods in rural education is very much affecting the learning situation of orphans and needs to be addressed. This is in line with Shi, J., & Sercombe, P. (2020). These scholars are also of the same opinion.3) The learning environment in the rural areas is not good and there is lack of teaching and learning resources, this is not conducive to the academic qualifications of the orphans and needs to be stamped on the environment. This is in line with Nyangarika & Ngasa, (2020). 4) As a new vulnerable group, left-behind children in rural areas have become a major social problem and have attracted great attention from society as a whole. Left-behind children have many problems in the areas of academics, psychology, personal safety and compliance with the law. These problems are caused by society, schools, families and the children themselves, and it is therefore necessary to deepen the reform of the urban-rural dichotomy, vigorously develop the rural economy and solve the problems of children left behind in rural areas through the joint efforts of schools, families and society. This is similar to Zhou, (2022). The findings of the scholars are similar. Therefore, a strategic approach to improving the academic performance of adolescent orphans in rural areas of China could begin with the following. 1) Problems in overcoming psychological disturbances in improving orphans' academic performance. 2) The problem of economic support for orphans to improve their academic performance. 3) The problem of teaching aids for

orphans to improve their academic performance. 4) Orphans need economic support to improve their academic performance. 5) Orphans need the support of a father's love to improve their academic performance. 6) Orphans need the support of their mother's love to improve their academic performance. 7) Orphans need attention and support from all sectors of society. 8) The impact of good teachers on orphans. In conclusion, improving the academic performance of adolescent orphans in rural areas of China is of great significance in realizing educational equity and promoting social justice and sustainable development. By providing them with good learning environments, resources and support, we can stimulate their potential, help them overcome their difficulties and create a better future for themselves and society.

## **7. Recommendations for Further Study**

1) Research on the evaluation towards for a strategic guideline of enhance learning achievement for young orphans in rural areas of China must be executed.

2) Research of factors affecting a strategic guideline of enhance the learning achievement for the young orphans in Rural Areas of China must be executed.

3) Prospects: This study aims to solve problems and construct STRATEGIC GUIDELINES process to improve the academic performance of orphans and to provide basic methods and reference values for rural teachers.

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**Constructing Strategic Guidelines for Developing Desirable Characteristics and Behaviors of Art Students in Higher Vocational Colleges:  
A Case Study of Nanjing Institute of Visual Arts, China**

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**ABSTRACT**

The objectives of this research were: 1) To investigate behavioral problems of art students in higher vocational colleges, 2) To investigate needs of strategic guidelines for developing desirable Characteristics and Behaviors of Art students in higher vocational colleges, and 3) To develop strategic guidelines for developing desirable Characteristics and Behaviors of Art students in higher vocational colleges. The respondents in this research were 306 students, 30 teachers/administrators and 20 employers obtained through simple random sampling at Nanjing Institute of Visual Arts as a case study. Moreover, the 3 specialists were used for the focus group discussion meeting. The research instrument employed in this study were questionnaires and a set of questions for the focus group discussion meetings. The information and data collected were analyzed through the content analysis method and presented in terms of frequency count, mean values, standard deviation.

The findings indicated that: 1) behavioral problems of art students and needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges at Nanjing Institute of Visual Arts were all in the "Highest" level, and 2) The constructed strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges comprises of 5 units. All of the five units were evaluated by the 3 specialists and possessed the IOC values from 0.66 to 1.0 meaning the constructed

strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges were acceptable and could be used as strategic guidelines for developing desirable characteristics and behaviors for teachers/administrators and art students at Nanjing Institute of Visual Arts.

**Keywords:** Strategic guidelines, desirable characteristics, behaviors, Nanjing Institute of Visual Arts.

## **1. Background**

At present, the understanding of education of all social classes is developing towards the direction of universal academic qualifications and interests, resulting in fierce competition in the college entrance examination and narrow channels for talent promotion. In recent years, the state has vigorously promoted the talent training of higher vocational education, and vocational education has entered the fast lane of improving quality. In higher vocational education, art majors in higher vocational colleges have long been regarded as low-level talents in the college entrance examination, mainly because of the low threshold of cultural courses and the low score of cultural admission in the college entrance examination. Such students usually perform well in professional basic courses and have good artistic literacy and creativity. As a special group in the higher vocational education system, art students are different from ordinary college students in the aspects of thinking mode, cultural accomplishment and learning habits. For colleges and universities, how to dig out high-quality art students in higher vocational colleges, explore targeted systematic management and teaching models, and deliver sustainable artistic innovation skills for the society is undoubtedly a top priority. Zhang Lijuan, Yao Qi (2019) carried out a research project entitled "Research on the Characteristics of Art Students in Higher Vocational Colleges and Educational Management Countermeasures". Compared with ordinary arts and science students, art students have their own unique characteristics in thinking mode, behavior mode, learning habit and so on. At this time, it is logical to explore and optimize the education management of art students in higher vocational colleges and analyze its characteristics. In this way, we can better grasp the laws and characteristics of the physical and mental development of such students, and optimize educational management based on this, so as to effectively improve the effectiveness of educational management, so that art students in higher vocational colleges can get better education, so as to effectively improve the training quality.

## **2. Objectives**

- 1) To investigate behavioral problems of art students in higher vocational colleges.
- 2) To investigate needs of strategic guidelines for developing desirable Characteristics and Behaviors of Art students in higher vocational colleges.
- 3) To develop strategic guidelines for developing desirable characteristics and behaviors of Art students in higher vocational colleges.

### 3. Review of Literature

#### 3.1 Concepts/Theories/Related Research

Art education, as the name implies, can be understood as the use of professional art knowledge and skills to guide students to systematically learn art. Under the background of the implementation of quality education in the new curriculum reform, art education has been continuously promoted and pushed to the forefront. With the continuous advancement of quality education under the new curriculum reform of our country, students in addition to master basic professional knowledge and skills, but also to improve their own aesthetic ability, the cultivation of aesthetic ability for students is an important link for quality education in colleges and universities, and fine art education is precisely an important way to cultivate students' aesthetic quality and improve students' aesthetic ability. Therefore, Li Wanqing (2022) carried out a research project entitled "Exploration of Innovation and Entrepreneurship Education Mode Reform in higher vocational art colleges". As the national education department attaches great importance to art, higher vocational colleges conform to the national policy and the trend of social development, and include art majors in the scope of teaching. Under the background of mass entrepreneurship, innovation and entrepreneurship education in higher vocational art colleges came into being. This paper mainly analyzes the essence of higher vocational art innovation and entrepreneurship education and the influencing factors of innovation and entrepreneurship education, and further studies the specific mode of innovation and entrepreneurship education in higher vocational art colleges.

#### 3.2 Conceptual Framework

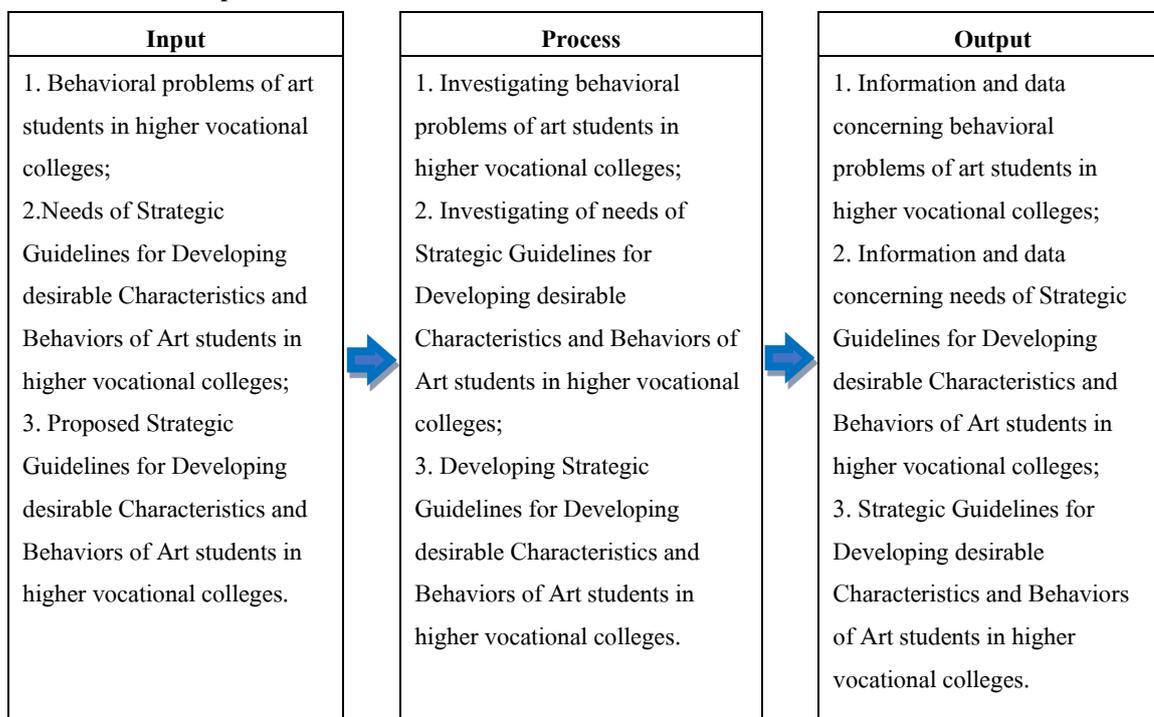


Figure 1 Conceptual Framework

#### **4. Research methodology**

##### **4.1 Population/Sample groups**

Nanjing Institute of Visual Arts was used as a case study.

**Population:** For the investigation of problems and needs, the population were divided into 3 groups, namely; 1) 13,00 students in 2021; 2) 32 teachers/administrators; 3) 20 employers from school-enterprise partnerships.

**Samples groups:** In this research project the sample groups were divided into 3 groups; namely, 1) 306 students; 2) 32 teachers /administrators; 3) 20 employers from school-enterprise partnerships. The respondents were obtained through the Stratified random sampling technique. The sample groups were derived from Taro Yamane formula (Yamane, 1973).

##### **4.2 Research Instruments**

1) Questionnaires: This paper studies the learning characteristics and daily behaviors of art students, and conducts research and analysis to understand and master the current research status and results by reviewing the existing paper databases, core journals, literature and related literature collected by induction. After drawing up the questionnaire outline, the contents of the questionnaire were analyzed and adjusted, and finally the three groups of research objects were investigated. For the investigation of problems and needs, questionnaire was employed for the data collection. The questionnaire is divided into two ways: online and offline. Online use of Questionnaire Star APP, offline use of paper questionnaires. The questionnaire was divided 3 sets for different sample groups; Namely :1) students; 2) teachers/administrators; 3) employers. The questionnaire was evaluated of its validity with the index of Congruence (IOC). Each question in the questionnaire had an IOC ranging from 0.66 to 1.00. In addition, the reliability of the questionnaire was evaluated through alpha Cronbach coefficient of 0.86.

2) Qualitative research was used in this study. For the development of the strategic guidelines, a set of questions were used for the 3 focus group this discussion meeting. The developed guidelines were evaluated by three experts who provided comments, ideas and suggestions on the correctness and suitability of the guidelines. The correctness and suitability of the guidelines were presented in the terms of IOC (Index of Congruence).

##### **4.3 Data collection**

For the investigation of problems and needs, the researcher himself collected the data and information from the sample groups online via emailing. Moreover, the three focus group discussion meetings were conducted to recruit the comments, ideas and suggestions for the correctness and improvement of the strategic guidelines.

##### **4.4 Data Analysis**

1) For the investigation of problems and needs, the Data and information collected were been analyzed interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems.

2) For the correctness and improvement of the strategic guidelines, the ideas, suggestions and comments of the 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the guidelines.

## 5. Research Results

### 5.1 Behavioral problems of art students in higher vocational colleges

1) Behavioral problems of art students in higher vocational colleges in the opinions of students

Table 1: Behavioral problems of art students in higher vocational colleges in students' opinions

Questions	n=306		Level of Problems
	$\bar{X}$	S.D.	
1) You think there are many problems with your current behavioral characteristics.	4.51	0.55	Highest
2) You're not satisfied with all aspects of your abilities.	4.56	0.51	Highest
3) You don't have confidence in the excellence of your behavioral characteristics.	4.64	0.50	Highest
4) You don't know your school's student behavior manual very well.	4.67	0.31	Highest
5) Changing undesirable behaviors can't make you a better person.	4.62	0.48	Highest
6) Good behavioral characteristics don't contribute to the future development of individuals and society.	4.53	0.45	Highest
7) You don't realize you have problems with your behavioral characteristics, and it's hard to improve them.	4.55	0.39	Highest
8) You don't have a strong desire to change your undesirable behavioral characteristics.	4.56	0.37	Highest
<b>Total</b>	<b>4.58</b>	<b>0.45</b>	<b>Highest</b>

It can be seen from Table 1, that most of the students evaluated Behavioral problems of art students in higher vocational colleges The average score is the highest level (mean score=4.58, S.D. =0.45).

2) Behavioral problems of art students in higher vocational colleges in the opinions of teachers/administrators

Table 2: Behavioral problems of art students in higher vocational colleges in teachers/administrators' opinions

Questions	n=32		Level of Problems
	$\bar{X}$	S.D.	
1) You think there are many problems with students' current behavioral characteristics.	4.69	0.42	Highest
2) You're not satisfied with all aspects of students' abilities.	4.51	0.45	Highest
3) Your students don't have confidence in the excellence of students' behavioral characteristics.	4.53	0.43	Highest
4) The students don't know the school's student behavior manual very well.	4.62	0.44	Highest
5) Changing undesirable behaviors can make students better.	4.55	0.58	Highest
6) Good behavioral characteristics contribute to the future development of individuals and society.	4.56	0.38	Highest
7) You find that students are not aware that there are problems with their behavioral characteristics, and they struggle to improve.	4.61	0.44	Highest
8) The willingness of students to change their undesirable behavior characteristics is not strong.	4.55	0.45	Highest
<b>Total</b>	<b>4.58</b>	<b>0.45</b>	<b>Highest</b>

According to Table 2, It can be seen that most of the teachers/administrators evaluated Behavioral problems of art students in higher vocational colleges The average score is the highest level ( $\bar{X} = 4.57$ , S.D. = 0.45).

3) Behavioral problems of art students in higher vocational colleges in the opinions of employers

Table 3: Behavioral problems of art students in higher vocational colleges in employers' opinions

Questions	n=20		Level of Problems
	$\bar{X}$	S.D.	
1) You think there are many problems with students' current behavioral characteristics.	4.68	0.32	Highest
2) Your students don't have confidence in the excellence of students' behavioral characteristics.	4.53	0.40	Highest
3) Changing undesirable behaviors can make students better.	4.56	0.46	Highest
4) Good behavioral characteristics contribute to the future development of individuals and society.	4.55	0.36	Highest
5) You find that students are not aware that there are problems with their behavioral characteristics, and they struggle to improve.	4.61	0.48	Highest
<b>Total</b>	<b>4.59</b>	<b>0.40</b>	<b>Highest</b>

According to Table 3, It can be seen that most of the employers evaluated Behavioral problems of art students in higher vocational colleges The average score is the highest level (mean score=4.59, S.D. =0.40).

5.2 Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges

1) Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges in students' opinions

Table 4: Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges in students' opinions

Questions	n=306		Level of Problems
	$\bar{X}$	S.D.	
1) You think that you need to improve your current behavioral characteristics.	4.52	0.45	Highest
2) You want to be satisfied with all aspects of your abilities.	4.55	0.41	Highest
3) You want to have confidence in the excellence of your behavioral characteristics.	4.65	0.42	Highest
4) You need to be familiar with school's student behavior manual very well.	4.66	0.38	Highest
5) Changing undesirable behaviors can make you a better person.	4.61	0.30	Highest
6) Undesirable behavior characteristics can affect study and life.	4.52	0.21	Highest
7) Good behavioral characteristics can contribute to the future development of individuals and society.	4.54	0.34	Highest
8) You realize you have no problem with your behavioral characteristics, and if there are problems it is easy to improve.	4.56	0.31	Highest
<b>Total</b>	<b>4.58</b>	<b>0.35</b>	<b>Highest</b>

According to table 4, It can be seen that most of the students evaluated Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges The average score is the highest level (mean score=4.58, S.D. =0.35).

2) Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges in teachers'/administrators' opinions

Table 5: Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges in teachers'/administrators' opinions

Questions	n=32		Level of Problems
	$\bar{X}$	S.D.	
1) You think there are some problems with students' current behavioral characteristics.	4.49	0.52	Highest
2) You are not satisfied with all aspects of students' abilities.	4.52	0.51	Highest
3) You don't have confidence in the excellence of students' behavioral characteristics.	4.61	0.59	Highest
4) Changing undesirable behaviors can make students better.	4.62	0.30	Highest
5) Undesirable behavior characteristics can affect students' study and life.	4.58	0.39	Highest
6) Good behavioral characteristics can contribute to the future development of individuals and society.	4.55	0.36	Highest
7) You find that students aren't aware that there are problems with their behavioral characteristics.	4.53	0.31	Highest
8) The willingness of students to change their undesirable behavior characteristics isn't strong.	4.59	0.29	Highest
<b>Total</b>	<b>4.56</b>	<b>0.41</b>	<b>Highest</b>

According to Table 5, It can be seen that most of the teachers/administrators evaluated Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges The average score is the highest level (mean score=4.56, S.D. =0.41).

3) Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges in employers' opinions

Table 6: Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges in employers' opinions

Questions	n=20		Level of Problems
	$\bar{X}$	S.D.	
1) You think there are some problems with students' current behavioral characteristics.	4.46	0.41	Highest
2) You don't have confidence in the excellence of students' behavioral characteristics.	4.62	0.44	Highest
3) Changing undesirable behaviors can make students better.	4.63	0.31	Highest
4) Good behavioral characteristics can contribute to the future development of individuals and society.	4.53	0.36	Highest
5) You find that students aren't aware that there are problems with their behavioral characteristics.	4.58	0.31	Highest
<b>Total</b>	<b>4.56</b>	<b>0.37</b>	<b>Highest</b>

According to Table 6, It can be seen that most of the employers evaluated Needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges The average score is the highest level ( $\bar{X}=4.56$ , S.D. =0.37).

### **5.3 The strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges**

According to the results from this study, the strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges composes of five units; Namely: 1) Art students of higher vocational colleges in China 2) Current characteristics and behaviors of Art students in higher vocational colleges 3) Desirable characteristics and behaviors of Art students in higher vocational colleges 4) Measures and guidelines for the development of desirable characteristics and behaviors of Art students in higher vocational colleges and 5) Implementation of development measures and feedback mechanisms. All five units were assessed by 3 specialists for the correctness and applicability of the content, expressed as IOC (Index of Consistency) values. All five units were assessed with an IOC value between 0.66 and 1.0, indicating that the strategic guidelines for the development of ideal character and behavior of art students in higher vocational colleges are acceptable, and can be used as the strategic guidelines for developing desirable characteristics and behaviors of students in Nanjing Institute of Visual Arts to improve students' ability and competitiveness and the teaching and management efficiency of faculty members, and corporate recognition of graduates.

## **6. Discussion of the Research Results**

According to the investigation of behavioral problems of art students in higher vocational colleges, it can be concluded that most of the students rated the behavioral problems of art students in higher vocational colleges are at the “Highest” level ( $\bar{X}=4.58$ , S.D. =0.45). Similarly, most of the teachers/ administrators and employers rated the Behavioral problems of art students in higher vocational colleges are all at the “Highest” level; For the needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges, it can be concluded that most of the students rated the needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges are at the “Highest” level ( $\bar{X}=4.58$ , S.D. =0.35). In the same, most of the teachers/school administrators and employers rated the needs of strategic guidelines for developing desirable characteristics and behaviors of art students in higher vocational colleges are all at the “Highest” level. According to the strategic Guidelines of Developing desirable Characteristics and Behaviors of Art students in higher vocational colleges, five units; Namely: 1) Art students of higher vocational colleges in China 2) Current characteristics and behaviors of Art students in higher vocational colleges 3) Desirable characteristics and behaviors of Art students in higher vocational colleges 4) Measures and guidelines for the development of desirable characteristics and behaviors of Art students in higher vocational colleges and 5) Implementation of development measures and feedback mechanisms. To sum up, from the perspective of art teaching, management and enterprise employment in higher vocational colleges, cultivating ideal characteristics and behaviors of art students has become an important part of teaching and

management goals. The results from this study were found relevant to the research results of Zou Yuan (2021) in that when teaching management is carried out for art students in higher vocational colleges, it is necessary to conduct a systematic analysis of the characteristics shown by these students, and then comprehensively form good and targeted management means on the basis of understanding their defects and shortcomings. In addition, by improving the professional ability of teachers and analyzing the market employment demand, we can make preparations for correctly guiding students to develop and improve themselves and meet the needs of market development. Only in this way can we cultivate art professionals with both virtue and ability through the later theory and practice, and promote their rapid development. At the same time, establish new teaching ideas and innovate teaching methods. In order to improve and solve the above situation and existing problems, it is necessary for teachers and administrators to take effective countermeasures together and students to cooperate actively. Teachers and administrators, while following the guidelines in teaching and management, need to pay attention to ways and means so that students can better adapt to and improve the existing problems. Of course, the effect of this reform is not achieved overnight, and requires joint efforts from many aspects. Construct this set of guidelines to gradually achieve the goal of ideal characteristics and behaviors of art students.

## **7. Recommendations for Further Study**

1) Schools need to build an evaluation system of teaching and management for the comprehensive development of art students.

2) Education departments need to "vary from person to person" and develop training plans for different groups of students in different majors.

## **8. Acknowledgement**

Firstly, my sincerest gratitude should be goes to my major thesis advisor Dr. Kris Phattaraphakin and my co-advisor Pol. Maj. Gen. Dr. Kitpinit Usaho for their professional guidance, encouragement and kindness which inspired me a lot throughout conducting and writing this thesis. Without their persistent help, this thesis would not have been possible. Secondly, I would like to thank all the thesis defense committee members, including three teachers, they are Dr. Araya Ariya, chair of the committee, Dr. kris Phattaraphakin, and last one is Pol. Maj. Gen. Dr. Kitpinit Usaho, each of them has provided me extensive professional guidance and I have learnt a lot from them by their detailed comments and suggestions. My special thanks to Dr. Kris Phattaraphakin who taught me a great deal about educational research and he never ending help in utilizing statistics. The next one should be the three specialists to evaluate the competence and correctness of the questionnaire and handbook. And I also need to say many thanks to Asst. Prof. Dr. Yuwalak Vejwitayaklung, the president accepted me as a student at Dhonburi Rajabhat University. I would like to thank Nanjing Institute of Visual Arts for providing corresponding support and help for my data statistics Finally, I wish to thank every member in my family for their continued support and encouragement, who experienced all the ups and downs of my research.

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**Developing Strategic Guidelines for Teaching Painting Art for Pre-school Service  
Students: A Case Study of Weifang Institute of Technology in China**

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**ABSTRACT**

The objectives of this study were 1) to investigate problems and needs including SWOT analysis of teaching painting art to pre-school service students; 2) to develop strategic guidelines for teaching painting art for pre-school service students. In this study, a sample of 240 students, and 17 art teachers and 2 administrators from Weifang Polytechnic Institute, were obtained through a stratified random sampling technique. The research instruments used in this study were questionnaire and a set of questions for focus group discussion. The data and information were analyzed, interpreted and then presented in terms of frequency count, percentage mean, and standard deviation. The results of the study showed that: 1) the problems and needs of teaching painting art to pre-school education service students at Weifang Polytechnic were at the "highest" level; 2) the SWOT analysis suggested that the school should focus on strengthening the practical link, optimizing the curriculum design and deepening the cooperation between schools and enterprises so as to improve the learning quality of painting art for preschool service students 3) the strategic guidelines for teaching painting art to pre-school education service students comprising of eight units, were evaluated by three experts with the range of IOC value 0.67 to 1.00. This means that the developed guidelines for teaching painting art to pre-school service students is acceptable and can be used as the guidelines for teaching painting art to art teachers and students of Weifang Polytechnic Institute to improve their skills and knowledge of painting art.

**Keywords:** strategic guidelines, pre-school service students, painting Art teaching

## **1. Introduction**

Painting art teaching is one of the required courses for pre-school students. Painting art education for pre-school service majors has a certain specificity, different from that of professional art colleges. Its purpose is not only limited to improving students' basic aesthetic knowledge and painting skills, but also requires students to master the skills of early childhood art education, enhance their practical ability, strengthen their aesthetic consciousness, and improve their artistic cultivation, so that the students can "apply what they have learned and learn what they know", and lay the foundation for future pre-school education majors to engage in early childhood education. Gao (2010) believed that early childhood art is an important means of expression for young children's perception of the real world, they express their feelings, colors, and images from the life they usually come into contact with through the artworks. The future education target of pre-school education service majors is pre-school children, who do not have the foundation to receive systematic knowledge education and skills training. Shen (2018) pointed out in the exploration of early childhood art teaching mode based on the concept of creative sketching that if it can pay attention to the multiple educational values of painting, it can help children complete the life process of "becoming human" in a more dynamic way. Therefore, as a future pre-school art teacher, pre-school students not only need to have basic painting ability and handicraft ability, but also comprehensive basic art knowledge, strong art appreciation ability, and a higher degree of personality quality and aesthetic cultivation, so that they can play a leading role in stimulating the potential of pre-school education activities. Moreover, teachers should understand that the learning of art courses is mainly to guide and help students understand the world and improve their cognitive level. Therefore, it is necessary to do a research on constructing a strategic Guidelines for teaching painting art for pre-school service students. The use of a strategy manual will enable preschool art teachers and preschool service students to better learn the art of drawing and provide a basis for solving related problems.

## **2. Research Objectives**

- (1) To investigate problems and needs of teaching of painting art for pre-school education service students.
- (2) To do SWOT analysis of teaching painting art to pre-school service students.
- (3) To develop strategic guidelines of painting art teaching for pre-school service students.

## **3. Literature Review**

### **3.1 Theory, Concept and Related Research**

Pre-school education refers to the education of preschool children aged 0-6 years old to carry out care and education activities to promote the healthy and harmonious development of young children's body and mind. The preschool education program aims to cultivate qualified early childhood teachers and other personnel engaged in work related to preschool education with good professional ethics, proficiency in theoretical

knowledge and skills, and professional competence, and its personnel training objectives for different levels of academic education have different requirements. (Bai, 2021)

Strategic guidelines refer to guidelines that provides strategy to preschool art teachers and preschool service students, as well as the guidelines on how to teach effectively.

The related research as follows:

Nana (2020) carried out a research project entitled “On the Current Situation of pre-school Art Teaching and the Necessity of Innovative Experimental Teaching”. The results of the research include: The paper proposes experimental and innovative aesthetic education teaching concepts by analyzing the current situation of pre-school art teaching. From the perspective of experimental art teaching, formulate scientific aesthetic education goals and improve teaching methods. Under the guidance of student-centered approach, teachers should enhance their personal teaching abilities and qualities, cooperate with experimental aesthetic education, help achieve aesthetic education goals, complete the navigation path between "ideal" teachers and "ideal" students, and promote the progress of pre-school art education.

Xiao (2022) carried out a research project entitled “On the Teaching Research and Practice of Art Courses in Pre-school Education Majors”. The results of the research showed that pre-school education is the most fundamental stage in the national education system. It not only promotes the comprehensive development of individual physical and mental health, but also lays an extremely important foundation for compulsory education, moral character, and other overall aspects.

The art course is an important course in pre-school education, which not only cultivates students' interests and aesthetics, but also serves as professional guidance for students to move towards future positions. However, there are some problems in the teaching of art courses in pre-school education majors, and they need to be conducted in-depth research and exploration to address these issues.

### 3.2 Research Framework

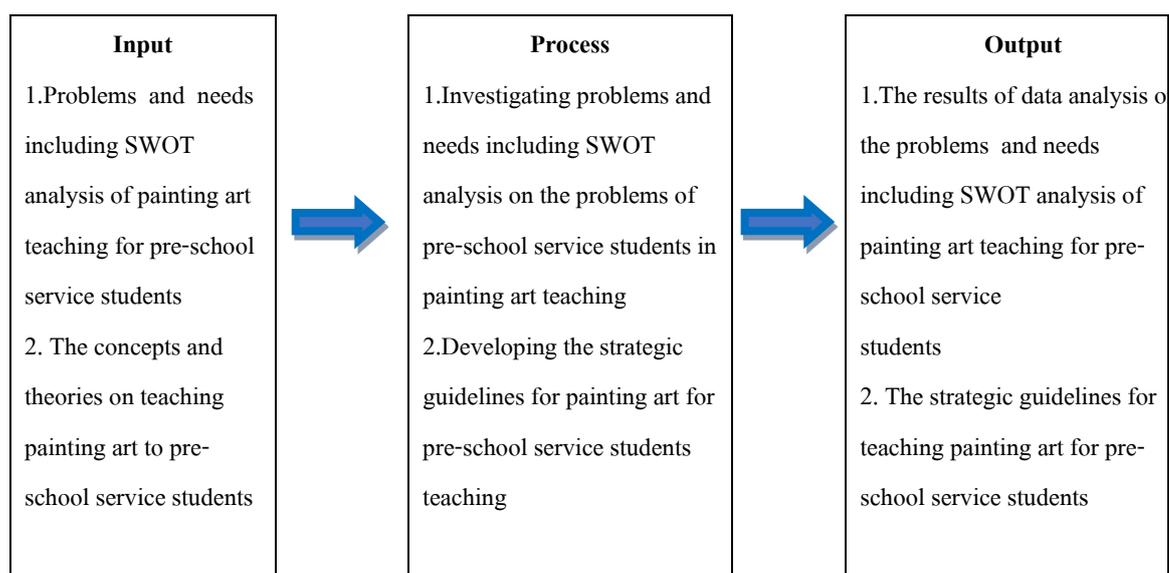


Figure 1 Research Framework

## **4. Research Methodology**

### **4.1 Research Design**

This study was mixed methods research by using quantitative research and qualitative research.

### **4.2 Population and Sample groups**

Weifang Institute of Technology was used as a case study.

**Population** The population was divided into 2 groups; namely, 1) 600 students 2) 17 painting teachers and 2 administrators.

**Sample groups** In this research, the sample groups were divided into 2 groups; namely, 1) 240 students, was obtained through Yamane formula (1973), 2) 17 paintings teachers and 2 administrators. The respondents were derived from stratified random sampling technique.

### **4.3 Research Instruments**

#### **1) Questionnaire:**

The questionnaire was divided into 3 parts: 1) General information. 2) Problems of painting art for pre-school service students 3) Needs of painting art for pre-school service students.

#### **2) A set of questions for the focus group discussion**

The three specialists were invited for the focus group discussion meeting to share ideas and give comments concerning the correctness and suitability of the guidelines. The results then were presented in terms of IOC (The Index of Item-Objective Congruence).

### **4.4 Data Collection**

The researchers collected data and information from the sample groups of 17 teachers and 2 administrators, and 240 students through the "Questionnaire" APP, which was approved by three art specialists in the form of IOC score (Index of item-objective congruence).

For the SWOT analysis, all the 17 art teachers and 2 administrators from the preschool education program of Weifang Institute of Technology, were invited to share ideas, experiences, and assessed the strengths, weaknesses, opportunities, and threats of teaching Art for pre-school service students.

### **4.5 Data Analysis**

The data and information collected were analyzed, interpreted and then presented in terms of frequency, percentage, mean ( $\bar{X}$ ), and standard deviation (S.D.).

## **5. Research Findings**

The problems and needs of teachers and administrators on teaching painting art for pre-school service students in Weifang Institute of Technology are at the "highest" level of teaching in both theory and practice.

The findings are as follows:

### 5.1 Problems of painting art teaching for pre-school service students in the opinion of teachers and administrators

Table 1 Opinions of teachers and administrators on the problems of teaching painting art for pre-school service students

Problems	Item	$\bar{X}$	S.D.	Level
1.	There are many problems with teaching the art of drawing to pre-school service students.	4.63	0.23	Highest
2.	Difficulty in combining theoretical knowledge with practice.	4.57	0.45	Highest
3.	Students do not have a foundation in art.	4.52	0.37	Highest

Table 1 shows that teachers and administrators rated the problems of teaching drawing art for pre-school service teacher at the highest level. Firstly, most of them believed that there are many problems in teaching drawing art to pre-school service students ( $\bar{X}= 4.63$ , S.D.=0.23). Secondly, many of them said that it is difficult to combine theory and practice ( $\bar{X}= 4.5$ , S.D.= 0.45). Finally, they said that the art foundation of pre-school service students is too poor ( $\bar{X}= 4.52$ , S.D=0.37).

### 5.2 Needs of painting art teaching for pre-school service students in the opinion of teachers and administrators

Table 2 Opinions of teachers and administrators on the needs of teaching painting art for pre-school service students

Needs	Item	$\bar{X}$	S.D.	Level
1	Students need to improve their art foundation.	4.67	0.34	Highest
2.	Students need to increase interest in the art of drawing.	4.62	0.32	Highest
3.	Teacher demonstrations are effective in improving students' drawing skills.	4.53	0.42	Highest

From the table 2, teachers and administrators rated the needs for teaching painting art to pre-school service students at the highest level. First, most teachers and administrators reported that improving students' art fundamentals had the greatest impact on art instruction, ( $\bar{X}=4.67$ , S.D=0.34). Second, most teachers and administrators indicated that teachers' increasing students' interest in the art of drawing had the greatest impact on art instruction, ( $\bar{X}= 4.62$ , S.D=0.32); and lastly, teachers and administrators reported that teachers' modeling is effective in improving students' drawing skills, ( $\bar{X}= 4.53$ , S.D=0.42).

### 5.3 Problems of painting art teaching for pre-school service students in the opinion of students

Table 3 Opinions of students on the problems of teaching painting art for pre-school service students

Problems	Item	$\bar{X}$	S.D.	Level
1.	Not very creative when it comes to doing artwork.	4.58	0.32	Highest
2.	Unreasonable methods of evaluating student work.	4.56	0.34	Highest
3.	Difficulty in completing after-school homework assigned by the teacher.	4.52	0.23	Highest

According to table 3, it shows that students rated the problems of learning the art of drawing and painting at the highest level. Firstly, most of students agree that the problems of painting art for pre-school service students in term of not very creative when it comes to doing artwork ( $\bar{X}=4.58$ ,  $SD=0.32$ ). Second, unreasonable methods of evaluating student work ( $\bar{X}=4.56$ ,  $SD=0.34$ ). Third, difficulty in completing after-school homework assigned by the teacher ( $\bar{X}=4.52$ ,  $SD=0.23$ ).

### 5.4 Needs of painting art teaching for pre-school service students in the opinion of students

Table 4 Opinions of students on the needs of learning painting art

Needs	Items	$\bar{X}$	S.D.	Level
1	There is need for teacher-student interaction in art instruction.	4.65	0.32	Highest
2.	Being creative when doing artwork is crucial.	4.56	0.23	Highest
3	Having confidence is important to learn the art of painting.	4.53	0.34	Highest

For the need of learning painting art of the students, it shows at the highest level. First, the majority of students indicated that having the need for interaction in art instruction had the greatest impact on art learning ( $\bar{X}=4.65$ ,  $S.D=0.32$ ). Second, being creative in art assignments helped to increase the effectiveness of the learning system and had the greatest impact on learning the art of painting ( $\bar{X}=4.56$ ,  $S.D=0.23$ ). Third, students indicated that having confidence in learning the art of painting is important. ( $\bar{X}=4.53$ ,  $S.D=0.34$ ).

### 5.5 The strategies guidelines of Teaching Painting Art to pre-school service students

Table 5 The index of item-objective congruence (IOC) for the strategic guidelines of painting art for pre-school service students

Topics/Contents	IOC
<b>Unit1: Understanding pre-school Art Education</b>	
1. Importance of Art Education for pre-school	0.67
2. Benefits of Teaching Painting Art	1.00
<b>Unit2: Curriculum Design and Content</b>	
1. Age-Appropriate Learning Objectives	1.00
2. Selection of Art Techniques and Mediums	0.67
<b>Unit3: Improving Students' Creative Skills</b>	
1. Play-Based Learning Approaches	1.00
2. Incorporating Creativity and Imagination	0.67
<b>Unit 4: Classroom Environment and Resources</b>	
1. Setting Up an Inspiring Art Space	0.67
2. Materials and Tools for Art Activities	1.00
<b>Unit 5: Assessment and Progress Tracking</b>	
1. Formative and Summative Assessment Strategies	0.67
2. Recognizing and Encouraging Artistic Growth	1.00
<b>Unit 6: Parent and Community Involvement</b>	
1. Engaging Parents in Art Education	1.0
2. Showcasing Student Artwork in the Community	0.67
<b>Unit 7: Implementation Strategies</b>	
1. Teacher Training and Professional Development	1.00
2. Creating a Positive and Inclusive Learning Atmosphere	0.67
<b>Unit 8: Case Study: Successful Art Projects</b>	
1. Showcasing Student Artwork and Projects	0.67
2. Collaborative Art Initiatives with Local Institutions	1.00

Table 5 shows that the three experts' ratings of content correctness and appropriateness as well as the IOC (Index of Item-Objectives Congruence) of the eight units are all at 0.67 or above, and they can be used as a teaching manual for improving the skills and abilities of drawing art in teaching drawing art to pre-school service students at Weifang Polytechnic.

## **6. Discussion**

### **6.1 An Analysis of the problems of teaching painting Art to pre-school service students in Weifang Polytechnic University.**

The results of the survey on the problems of teaching painting and art to preschool service students at Weifang Vocational and Technical College show that the art teachers at Weifang Vocational and Technical College are at the "highest" level in terms of theoretical knowledge and terminology, which indicates that there are problems with the education level of the art teachers. This coincides with Haoran's view (2014) that teachers should utilize games to improve learners' understanding and mastery of art knowledge because games can directly develop learners' interest and motivation in the learning process. At the same time, teachers should combine the theoretical knowledge of art with the practice of art in order to improve students' art skills. Mastering basic art skills is very important in today's time. Art is a tool for young children to express their thoughts. Early childhood art education is a purposeful and planned art education activity based on the laws of physical and mental development of pre-school children to meet their needs for expression, performance and creation. With the purpose of promoting the comprehensive and harmonious development of children's body and mind, it can fully develop children's intelligence and is the basic education of talent quality. In preschool children's art education activities, children are active learners, teachers are active supporters and guides, and they play an extremely important role in preschool children's art education.

### **6.2 An Analysis of the needs of teaching painting Art to pre-school service students in Weifang Polytechnic University.**

The results of the survey on the needs of teaching painting and art to preschool service students at Weifang Vocational and Technical College show that the aspects of poor art foundation and low interest of students in painting and art are at the "highest" level in Weifang Vocational and Technical College. This necessitates the need to improve the art foundation of preschool service students and their confidence in the art of painting. This coincides with Cheng Xue's view (2015). In human learning activities, interest plays a big role and is an important mental component that constitutes the motivation of human activities psychological factors. Interest not only directly affects students' interest in learning, but also, to a certain extent, constrains the learning effect. Interest is especially important in the art classroom.

### **6.3 The SWOT analysis of teaching painting Art to pre-school service students in Weifang Polytechnic University.**

During the workshop, participants could have an in-depth discussion on the strengths, weaknesses, opportunities and threats of Weifang Institute of Technology. Through in-depth discussion and SWOT analysis, it has come to the following conclusion: Weifang Institute of Technology has the potential of advantages and opportunities in the art of painting for preschool service students, but it still needs to address the challenges posed by disadvantages and threats. It is suggested that when the school builds a strategy manual of painting art for preschool service students, it should focus on strengthening the practical link, optimizing the curriculum design

and deepening the cooperation between schools and enterprises, so as to improve the learning quality of painting art for preschool service students and lay a solid foundation for their future career development.

#### **6.4 The guidelines of painting Art teaching to pre-school service students for the painting Art teachers and students at Weifang Institute of Technology**

The content of each unit focuses on theoretical knowledge and practice of the art of drawing, taken from reliable sources that can be referenced, and then simplified according to the level of knowledge of preschool service students learning the art of drawing. The Exercises section of the Drawing Art guidelines for Preschool Teachers in the Weifang Area focuses on practicing and improving drawing skills, as well as understanding basic art theory correctly and clearly and being able to apply it practically to the art of drawing. Learners must be able to apply the knowledge gained from the exercises to real-life scenarios. This coincides with the views of Gu (2020) that the learners' activities in the "Knowledge Understanding" and "Art Skills" sections are in line with one of the traditional approaches where learners are encouraged to combine understanding with practice in order to improve drawing skills quickly (Hu, 2015). Teachers should pay attention to the basic way of teaching, and make more use of model drawings in class to show students drawing skills, so that students can understand the whole process of drawing more intuitively (Luo, 2012). For students involved in the teaching of painting art, they should learn to adjust their mentality and understand that learning the art of painting is a basic skill necessary for students of preschool service majors, although the theory is relatively less, but it is not a vacation, but more practice should be put on practicing the painting skills, and more practice is an important way to improve the painting skills.

### **7. Recommendations for Further Study**

- (1) Factors affecting the artistic ability to draw among preschool service students at Weifang Institute of Technology.
- (2) The strategic guidelines on quality management in teaching art of drawing and painting.
- (3) The application of the teaching manual of painting art in Weifang Institute of Science and Technology.

### **8. Acknowledgement**

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**A Development of Strategic Guideline for Students in Arts Program: A Case  
Study of NANJING Institute of Visual Arts in Nanjing City, China**

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**ABSTRACT**

The objectives of this research were: 1) to investigate problems concerning employment after graduation of students in Arts program; 2) to investigate needs of strategic guidelines for occupational counseling and guidance for students in Arts Program; 3) to develop strategic guidelines for occupational counseling and guidance for students in Arts Program. The respondents in this research were 150 students and 50 teachers obtained through simple random sampling at Nanjing Institute of Visual Arts as a case study. The research instrument employed in this study was a questionnaire with 3 sections for 5 rating scales. The information and data collected were analyzed through the content analysis method and presented in terms of percentage, mean value, and standard deviation. The findings indicated that: 1) The students in arts program are nearly anxious about occupational planning and they need the occupational counseling; 2) there were different factors about occupational planning; 3) there are still many deficiencies in occupational counseling for art students.

**Keywords:** Strategics Guideline, Occupational Counseling, Students in Arts Program

## 1. Background

In recent years, the concept of occupational planning gradually spread in domestic universities, particularly the global economic development faces severe challenges, bringing huge impact on college students' employment, a growing number of colleges and universities in order to solve the problem of the current difficult employment, strengthen the guidance on college students' career planning work in the research and discussion. (Rong Yuheng, 2019) This has put forward higher requirements for students' occupational counseling and guidance in colleges and universities, requiring colleges and universities to carry out various forms of occupational counseling and guidance, to help students set up a correct view of career, to solve the problem of students' occupational development. Students' occupational counseling and guidance is of great significance to the development of universities and students. At this stage, with the continuous expansion of the enrollment scale of Chinese colleges and universities, the number of students in arts program has also increased to a certain extent. As a large part of contemporary college students, the students in arts program not only have the universal characteristics, but also have obvious particularity due to professional and personal characteristics. (Song Xiaoya, 2022) At present, the problems existed in students' employment is prominent, and combined with the impact of the epidemic, the employment problems of students in arts program have been mentioned to a new height. Providing the occupational counselling guidelines and guidance for the students in arts program is the top priority of graduates' work, and at the same time, new requirements are put forward for students' career education, which should not only guide students to do a good job planning, but also guide students to establish a correct view of employment and occupational choice. The biggest difference between art students and general culture students lies in that they have to enter the in-depth study of art major in college, and their major orientation is stronger when they take the art program as the future development. (Li Yiruo, 2022) In recent years, China has issued a series of policies to support career planning education at all stages. In order to understand the current situation of occupational career planning education for art students in the college, this paper sorts out the research situation of vocational career planning education for art students graduating from the university from the aspects of necessity, current situation, problems and effects. It presents that vocational career planning education for high school art students has research significance. (Zhang Qian, 2019) This paper combines the overall employment situation of college students, studies the characteristics of the students in arts program, investigates the problems in the occupational counselling for the students in the arts program, analyzes the employment situation of art graduates in recent years according to their psychological state and social supply and demand, explores the development prospects of art students, and puts forward suggestions for the psychological adjustment of art students and occupational guidance.

## **2. Objectives**

1. To investigate problems of the occupational counseling and guidance of students in Arts program;
2. To investigate needs of strategic guidelines for occupational counseling and guidance for students in Arts Program;
3. To develop strategic guidelines for occupational counselling and guidance for students in Arts Program

## **3. Review of Literature**

### **3.1 Concepts/Theories/Related Research**

Strategic guidelines refer to a guideline handbook for improving the work and quality of occupational counselling and guidance for students in arts program. Occupational counselling and guidance refer to the combination of individuals and organizations, on the basis of the determination, analysis and summary of the subjective and objective conditions of a person's career, the comprehensive analysis and balance of personal interests, hobbies, abilities and characteristics, combined with the characteristics of the times, according to the career tendency, to determine the best career goal, and to make effective arrangements for achieving this goal. Art students refers to students who major in art in college, including music, art, performance, etc. Art students themselves have complex personality characteristics in ideology, value pursuit, interests and specialties. The school still has some prominent problems in the system, management mode and teacher construction of art student management. Relevant theories and concepts related to occupational counselling and guidance for students in arts program includes Art College Graduates Employment and the Characteristics of Art College Graduates, (Liu Fang, 2021). Occupational counselling and guidance can help inspire art students to think about "what I want", establish life goals, formulate reasonable learning and action plans, discover self-worth and realize life ideals (Dai Wenwen, 2021). The Occupational guidance provides graduates with a variety of symposia and experience exchange meetings to cultivate a good attitude toward career selection and employment, establish a correct outlook on career selection and employment, and improve social adaptability and anti-frustration ability (Golden Feng, 2021).

Researchers have done a lot of research on the occupational education of college students and accumulated a lot of literatures of guiding significance for the occupational counselling of colleges and universities, and different research emphases have been presented in different periods.

### 3.2 Conceptual Framework

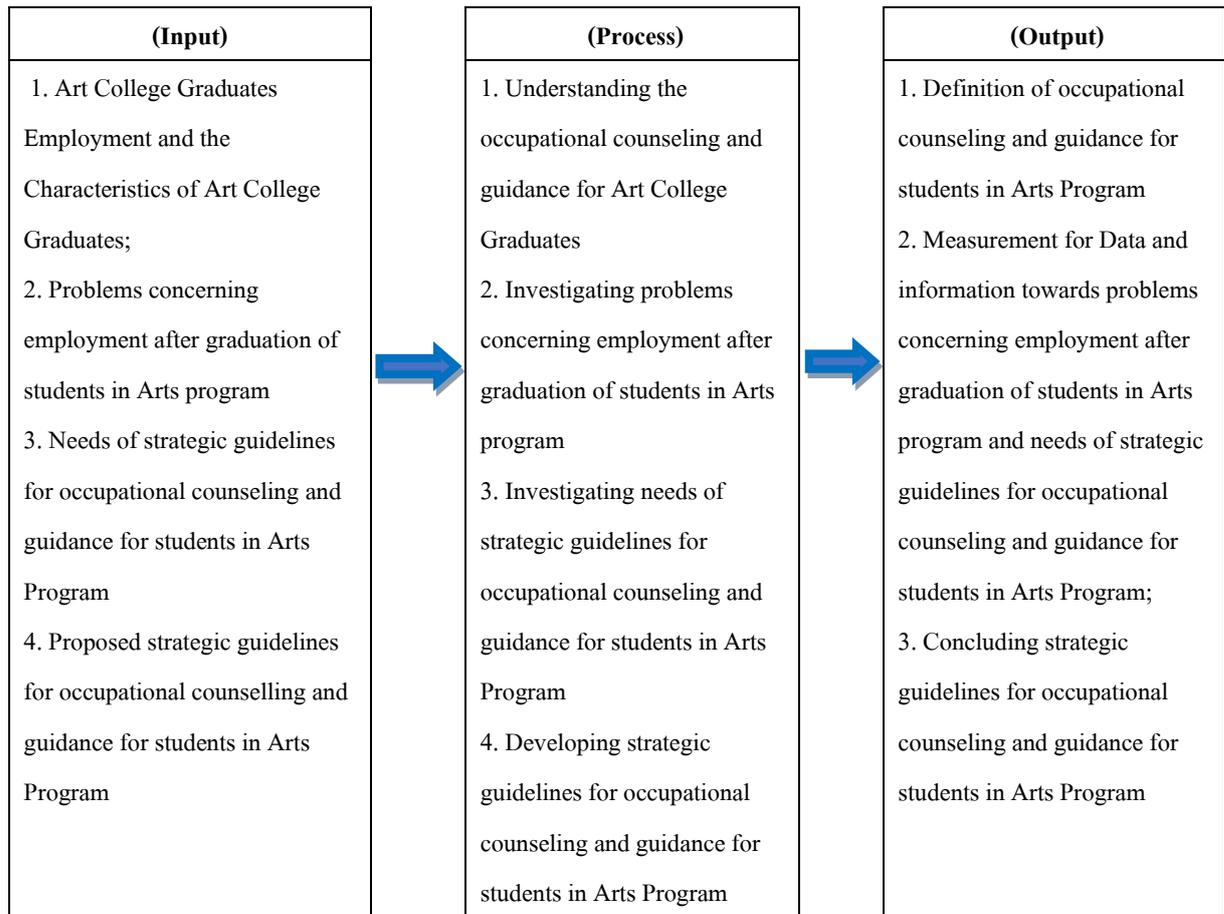


Figure 1 Conceptual Framework

## 4. Research methodology

### 4.1 Population/samples groups

**Population:** Nanjing Vocational College of Visual Arts will be used as a case study. In this study, the population will be divided into 2 groups; namely, 1) 1500 students in Arts program in the 2023 academic year (Nanjing Vocational College of Visual Arts, 2023: online) and 2) 50 teachers and administrators.

**Sample Groups:** the randomly drawing sample from the population in this study will be divided into 2 groups: namely, 1) 150 students and 2) 50 teachers and administrators. The sample groups will be obtained through stratified random sampling technique.

### 4.2 Research Instruments

1) In this research project, a questionnaire was employed for the data collection. The questionnaire was divided into 2 sets; namely, 1) students set and 2) teachers set. The 200 questionnaires were used to collect data and information. For the investigation of needs and problems, questionnaire was used a tool to collect data and information towards: 1) To investigate problems concerning the occupational counseling and guidance of students in Arts program; 2) To investigate needs of strategic guidelines for occupational counseling and guidance

for students in Arts Program; 3) To develop strategic guidelines for occupational counseling and guidance for students in Arts Program. The questionnaire will be evaluated and corrected in terms of correctness and suitability by three specialists, including 2 Thai professors and 1 English native speaker. All items in the questionnaire possessed the IOC (index of Congruence) value ranging from 0.66 to 1, which can be used to collect data and information for this study.

2) For the development of the strategic guidelines, the three focus group meetings were conducted to gain ideas and comments from the specialists.

#### **4.3 Data Collection**

1) For the investigation of needs and problems, the researcher himself collected data and information online via emailing using questionnaire. 2) For the development of the strategic guidelines, the three focus group meetings were conducted to gain ideas and comments from the specialists. A set of questions were constructed. The three specialists were invited to participate in the meetings and share ideas and comments towards the constructed guidelines.

#### **4.4 Data Analysis**

1) For the investigation of problems and needs, the Data and information collected were been analyzed, interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems.

2) For the correctness and improvement of the strategic guidelines, the analysis results will be stated as statistical analysis, presented in the form of frequency count, percentage, mean, standard deviation (S.D.) and qualitative research.

### **5. Research Results**

#### **5.1 Problems of strategic guidelines for the occupational counseling and guidance for the students in Arts Program**

##### **1) Problems of strategic guidelines for the occupational counseling and guidance for the students in Arts Program**

Table 1: Problems of strategic guidelines for the occupational counseling and guidance for the students in Arts Program

Questions for students	n=150		Level of problems
	$\bar{X}$	S.D.	
1.You think the school cannot improve its training, such as training objectives, curriculum content, scientific research training and so on for students	4.56	0.38	Highest
2.You think the industry and the country cannot help to improve the treatment of teachers for the occupational counseling	3.8	0.48	High
3.You think schools cannot enhance the professional competence of teachers for students in arts program	4.67	0.34	Highest
4.The major your student selected isn't the one they like	4.73	0.32	Highest
5.Your students are not satisfied with their current situation of career planning	4.15	0.46	High
6.The previous employment intentions didn't match the future occupation of your students	3.87	0.52	High
7.Your students think the employment didn't need higher degree	2.86	0.58	Medium
8.Your students can't take up your post this year and your next plans	2.45	0.62	Low
9.In case your students can't find jobs in their field, they don't want find works in other fields	4.76	0.34	Highest
10.Your students don't like the major you graduated	4.35	0.41	High
Average	4.02	0.45	High

It can be seen from Table 1, that most of the students evaluated problems of strategic guidelines for the occupational counseling and guidance for the students in Arts Program. The average score is the high level (mean score=4.02, S.D. =0.45).

**2) Problems of strategic guidelines for the occupational counseling and guidance for the teachers in Nanjing Institute of Visual Arts**

Table 2: Problems of strategic guidelines for the occupational counseling and guidance for the teachers in Nanjing Institute of Visual Arts

Questions for teachers and administrators	n=50		Level of problems
	$\bar{X}$	S.D.	
1.You think the school cannot improve its training, such as training objectives, curriculum content, scientific research training and so on for students	3.87	0.45	High
2.You think the industry and the country cannot help to improve the treatment of teachers for the occupational counseling	4.13	0.48	High
3.You think schools cannot enhance the professional competence of teachers for students in arts program	4.78	0.36	Highest
4.The major your student selected isn't the one they like	4.65	0.38	Highest
5.Your students are not satisfied with their current situation of career planning	4.32	0.46	High
6.The previous employment intentions didn't match the future occupation of your students	3.65	0.52	High
7.Your students think the employment didn't need higher degree	4.47	0.38	Highest
8.Your students can't take up your post this year and your next plans	4.65	0.57	Highest
9.In case your students can't find jobs in their field, they don't want find works in other fields	2.48	0.72	Low
10.Your students don't like the major you graduated	4.57	0.31	Highest
11.Your students are not working in their field of study	3.86	0.43	High
Total	4.16	0.46	High

According to Table 2, it can be seen that most of the teachers/administrators evaluated problems of strategic guidelines for the occupational counseling and guidance for the teachers in Nanjing Institute of Visual Arts. The average score is the high level ( $\bar{X}$  =4.16, S.D. =0.46).

## 5.2 Needs of providing strategic guidelines for the occupational counseling and guidance for the students in Arts Program

### 1) Needs of providing the strategic guidelines for the occupational counseling and guidance for the students in Arts Program

Table 3: Needs of providing the strategic guidelines for the occupational counseling and guidance for the students in Arts Program

Questions for students	n=150		Level of Needs
	$\bar{X}$	S.D.	
1.You need the occupational counseling and guidance before graduation	4.57	0.32	Highest
2.You need independent measures and systems for occupational counseling	4.66	0.36	Highest
3.You need safeguard measures for occupational planning	4.12	0.42	High
4. You need for the implementation of the occupational tutorial system in your school	4.64	0.41	Highest
5.It is necessary to guarantee the quality of professional education for students in education?	3.86	0.43	Medium
6.Students need corresponding internal security mechanism	4.78	0.28	Highest
7. The practice and innovation of occupational counseling and guidance are needed?	4.62	0.43	Highest
8. Teachers need to understand the status and characteristics of students when they graduate	4.12	0.44	High
9. You need strengthening and improving the internal guarantee mechanism for the quality of bachelor education	3.42	0.57	Medium
10. Students need the career plan for the future is occupational counseling and guidance	4.67	0.27	Highest
Total	4.35	0.39	Highest

According to table 3, It can be seen that most of the students evaluated needs of providing the strategic guidelines for the occupational counseling and guidance for the students in Arts Program The average score is the highest level (mean score=4.35, S.D. =0.39). After the survey, it can be seen that most of students in arts program think the needs and problems of occupational counselling and guidance are so important.

## **2) Needs of providing the strategic guidelines for the occupational counseling and guidance for the teachers and administrators**

Table 4: Needs of providing the strategic guidelines for the occupational counseling and guidance for the teachers and administrators

Questions for teachers and administrators	n=50		Level of Needs
	$\bar{X}$	S.D.	
1. Your students need the occupational counseling and guidance before graduation	4.65	0.38	Highest
2. Your students need independent measures and systems for occupational counseling	3.36	0.52	Highest
3. Your students need safeguard measures for occupational planning	4.66	0.34	Highest
4. Your students need for the implementation of the occupational tutorial system in your school	4.72	0.25	Highest
5. It is necessary to guarantee the quality of professional education for students in education?	4.65	0.38	Highest
6. Students need corresponding internal security mechanism	4.78	0.25	Highest
7. The practice and innovation of occupational counseling and guidance are needed for your students	4.32	0.48	Highest
8. Teachers need to understand the status and characteristics of students when they graduate	3.85	0.42	Highest
9. Students need the faculty offers help or follows up the graduates' career planning	4.72	0.27	Highest
10. Your students need strengthening and improving the internal guarantee mechanism for the quality of bachelor education	4.53	0.38	Highest
Total	4.42	0.37	Highest

According to Table 4, It can be seen that most of the teachers/administrators evaluated Needs of providing the strategic guidelines for the occupational counseling and guidance. The average score is the highest level (mean score=4.42, S.D. =0.37). The strategic guidelines developed help enhance the quality of students' graduation and occupational development at Nanjing Institute of Visual Arts. From the analysis of the results, it can be seen that the employment management of art graduates mainly revolves around the policy, universities and students in arts program, and the three parties are interrelated and influence each other. In order to improve the employment competitiveness of art graduates, it is necessary to form a multi-force and start from multiple places.

### **5.3 The strategic guidelines for Occupational Counseling and Guidance for Students in Arts Program in Nanjing Institute of Visual Arts**

The occupational counseling and guidance center in Nanjing Institute of Visual Arts is consisted of 1) The management of student' professional studies in arts program 2) Students' administration in arts program at university 3) The student graduation management and registration workflow 4) The student career planning education in arts program 5) The management process of handling the problems and difficulties in career planning for students 6)The employment policy interpretation process for students in arts program 7) The process of occupational counseling for students in arts program 8) The supervision and evaluation mechanism workflow 9) Employee occupational development management and tracking process. Each unit is composed of students' administration templates that facilitate the selection and retention of talent and facilitate the solving of students' graduation and employment challenges, from planning to management, from positions to capabilities. All nine units were assessed by five experts (three Thai professors and two native English speakers) on the accuracy and suitability of the content and given an IOC (Consistency Index) value. The evaluation and ownership degree of the nine units for the managers who compiled the students' occupational manual ranged from 0.8 to 1.0, indicating that the managers who compiled the strategic guidelines for the occupational counseling and guidance for the students in Arts Program were acceptable and could be used as a student administration manual to improve the graduate employment rate of Nanjing Institute of Visual Arts.

## **6. Discussion of the Research Results**

From the research results, we should discuss the importance of the occupational counseling and guidance for the students in Arts Program, from which we can understand the value of this topic in the students' graduation administration. After understanding the importance of this concept, we can discuss what are the problems existed in the occupational counseling and guidance for the students in Arts Program, in order to solve the problems, we should focus on the practice and innovation of occupational counseling and guidance and guarantee the quality of professional education for students in education as well as the occupational counseling and guidance for the students in Arts Program.

## **7. Recommendations for Further Study**

1) There are still some shortcomings in this paper, mainly because the questionnaire is only concentrated in one art university, and the applicable scope is certain limited, hence the paper could broaden the samples in the further study.

2) In the survey object, there is no follow-up survey of previous graduates, lack of quality of employment, hence this paper could enrich the information and data collection and analysis.

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## **Forging Industry-Academia Synergy: An In-depth Analysis of Vocational Education Transformation at Hebei Normal University for Nationalities**

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### **ABSTRACT**

In the context of China's rapid economic and industrial transformation, the necessity for skilled professionals who can adapt to the fast-paced changes in the job market has never been greater. Despite the strides made in vocational education, a glaring disconnect exists between the training provided by these educational institutions and the evolving requirements of industries. This Research aims to scrutinize the challenges and needs associated with integrating vocational education with industry, using Hebei Normal University for Nationalities as a case study, and to formulate strategic guidelines for facilitating this integration. Through online surveys and focus group discussions with 300 teachers and administrators, the study discovered that both the existing challenges and the demand for a structured approach were rated at the "highest level." A five-unit strategic guideline was then developed, covering aspects from reviewing institutional and industry profiles to evaluating and troubleshooting the integration process. This guideline was accessed through rigorous expert evaluation, confirming its suitability for enhancing vocational-industrial partnerships. The research not only underscores the immediate challenges and needs in vocational education integration but also offers a validated, multi-faceted strategic framework for institutions and industries seeking to achieve effective integration.

**Keywords:** Strategic guidelines, vocational education, integration, industry

## **1. Background**

With China's economic development and industrial transformation, the demand for high-quality skilled talents is increasing. However, there exists a mismatch between the talents cultivated by vocational education and actual industry needs. Integrating vocational education with industry has thus become an important way to cultivate practical talents adapted to market demand. In China, promoting integration between vocational education and industry has received extensive attention in recent years. Government policies like the "Vocational Education and Training Innovation Development Action Plan (2015-2018)" have emphasized strengthening cooperation between vocational colleges and enterprises. However, problems still exist in aspects like disjointed policies, insufficient resource investment, outdated curriculum and facilities, and lack of practical training. Previous studies have analyzed issues in China's vocational education-industry integration. Zhu Kehai (2016) pointed out problems like insufficient school-enterprise cooperation and mismatches between training and market needs. Su Yong (2018) also noted issues including imperfect management systems and insufficient teaching staff. While progress has been made, the integration is far from adequate. Hebei Normal University for Nationalities is a key vocational education institution in China. With rich resources and emphasis on cultivating students' vocational abilities, it provides an ideal case to study the integration of vocational education with industry. Investigating the problems and needs at the university can provide valuable references for promoting the integration. This study aims to develop strategic guidelines for Hebei Normal University for Nationalities to further integrate its vocational education with industry needs. It collects data from teachers and administrators to understand their views on the problems and needs of integration. The results are used to construct practical strategic guidelines that can promote cooperation with industry partners, optimize curriculum design, enhance teacher training, and ultimately improve student employment competitiveness. The strategic guidelines are expected to provide an effective approach to achieve deeper integration of vocational education with industry.

## **2. Objectives**

1.To investigate the opinions of teachers and administrators towards problems of integration of vocational education with industry.

2.To investigate the opinions of teachers and administrators towards needs of the strategic guidelines for the integration of vocational education with industry.

3.To construct strategic guidelines for the integration of vocational education with industry in vocational college.

## **3. Review of Literature**

### **3.1 Concepts/Theories/Related Research**

Key concepts relevant to this research include vocational education, industry integration, practical training, and talent cultivation. Vocational education aims to cultivate students' professional skills through combining theoretical learning with industry practice (Dewey, 2001). Industry integration refers to cooperation

between vocational colleges and industry partners to align training with market needs (Kuzbari, 2005). Practical training provides students with hands-on experience in real work environments (Kolb, 2015). Talent cultivation is a goal of vocational education-industry integration to develop skilled graduates that meet industry demand (Drucker, 1999). Theories highlight the importance of vocational education-industry integration. The OECD (2020) advocates integration to equip students with skills for the future economy. In China, the Ministry of Education (2018) has emphasized integration to improve vocational education quality and connections with industry trends. Related studies have analyzed issues in China's integration efforts. Zhu Kehai (2016) identified problems like insufficient school-enterprise cooperation. Fan Chenfei (2018) presented a case of successful integration in the automotive industry in Jiangxi province, noting key actions like jointly developing courses with industry partners. Xiao Huaqian (2022) proposed four paths for integration in Chinese vocational colleges, including policy, profession, strategy, and culture integration. This research aims to develop strategic guidelines for further integration of vocational education with industry at Hebei Normal University for Nationalities. It will investigate problems and needs voiced by internal stakeholders to inform practical guidelines for enhancing school-industry cooperation, curriculum relevance, and student development.

### 3.2 Conceptual Framework

<b>(Input)</b>	<b>(Process)</b>	<b>(Output)</b>
1.Problems of integration of vocational education with industry; 2.Needs of strategic guidelines for the integration of vocational education with industry in vocational college; 3. proposed Strategic guidelines for the integration of vocational education with industry in vocational college.	1.Investigating the problems of the integration of vocational education with industry; 2.Investigating needs for strategic guidelines for the integration of vocational education with industry in vocational college; 3.Constructing Strategic guidelines for the integration of vocational education with industry in vocational college.	1.Data and information concerning problems of the integration of vocational education with industry; 2.Data and Information Concerning needs of strategic guidelines for the integration of vocational education with industry; 3. Strategic guidelines for the integration of vocational education with industry in vocational college.

Figure 1 Conceptual Framework

## 4. Research methodology

### 4.1 Population/Sample Groups

In this study, Hebei Normal University for Nationalities was used as a case study. For the investigation of needs and problems, The population and samples included 300 teachers and administrators. In addition, three

specialists were used for the focus group discussion meeting to gain comments and suggestions concerning the construction of the strategic guidelines.

#### **4.2 Research Instrument**

For the investigation of needs and problems, questionnaire was used for the collection of data and information from the sample groups. Question content is based on literature review and objectives. Questionnaire validity is ensured through expert evaluation adopting the Index of Congruence (IOC) as a statistical measure in the context of two factor structures. The IOC typically ranges from 0.00 to 1.00, with higher values indicating a higher degree of congruence or similarity between the two factor structures. The research also adopted the Alpha Cronbach Value to assess internal consistency or reliability of a scale or a set of items within a questionnaire or test. The value is subsequently compared with Likert rating scales to quantify subjective responses from a 5-option response ranging from strongly disagree, disagree, neutral, agree, and strongly agree. The questionnaire composed of 3 sections; namely, 1) general information, and 2) opinions of teachers and administrators towards problems of the integration of vocational education with Industry, 2) opinions of teachers and administrators towards needs of the strategic guidelines for the Integration of vocational education with industry, and 3) strategic guidelines for the integration of vocational education with industry. All the questions in the questionnaire were evaluated and approved by three specialists for its validity in terms of IOC (Index of Congruence) ranging from 0.66 to 1.0. In addition, the reliability of the questionnaire was evaluated and presented in terms of Alpha Cronbach Value which was found at 0.86. Respondents are presented with a set of response options that reflect their level of agreement or disagreement reflected by the Likert scale. Respondents would choose the response option that best matches their level of satisfaction from the 300 participants.

#### **4.3 Data Collection**

In order to assess needs and issues through a questionnaire, the researcher personally gathered data and information online by means of email correspondence. Furthermore, feedback and input from three experts were obtained through a series of three focus group discussions conducted via Zoom. The feedback and input obtained were then utilized to refine and approve the strategic guidelines.

#### **4.4 Data Analysis**

1) In the process of conducting our research, we analyzed, interpreted, and presented the data and information pertaining to the needs and issues derived from our sampled groups. This analysis was carried out employing various statistical measures, including frequency counts, percentages, means, and standard deviations. To gauge the respondents' opinions accurately, we utilized the Five-Point Likert Rating Scale. This scale allowed us to assess the level and extent of agreement or disagreement expressed by the respondents regarding the subjects under consideration. Additionally, the qualitative input, encompassing comments and ideas articulated during three distinct focus group discussion sessions, underwent a content analysis technique. This qualitative approach enabled us to gain a deeper understanding of the nuanced perspectives and insights shared by participants during these discussions.

2) To form our strategic guidelines, our analytical approach was to employ the Index of Congruence (IOC) as the evaluation metric. The comments and ideas obtained from the three specialists were analyzed through content analysis and then used it to evaluate the guidelines in terms of correctness and suitability via IOC.

## 5. Research Results

### 5.1 Problems of the integration of vocational education and industry.

Table1 Problems of the integration of vocational education and industry.

Questions	n=300		Level of problems
	$\bar{x}$	S.D.	
1. You think that vocational education and industry integration have not received enough attention and support in the education system	4.55	0.2	Highest
2. You think that the integration of vocational education and industry is not close enough.	4.57	0.2	Highest
3. You think that the integration of vocational education and industry lacks necessary resource input.	4.55	0.2	Highest
4. You do not think that the relevant policies of vocational education and industry integration have been effectively implemented and supervised.	4.53	0.21	Highest
5. You do not think that the training content of vocational education and industry integration is in line with actual needs.	4.55	0.21	Highest
6. You think that the teaching methods and means of vocational education and industry integration need to be improved.	4.54	0.20	Highest
7. You think that vocational education and industry integration lacks opportunities for cooperation with industry.	4.58	0.20	Highest
8. You do not think that the evaluation criteria of vocational education and industry integration are clear and specific.	4.55	0.21	Highest
9. You think that there are problems with vocational education and industry integration in terms of student employment.	4.57	0.20	Highest
10. You do not think that the course settings of vocational education and industry integration are flexible and diverse enough.	4.54	0.21	Highest
<b>Total</b>	<b>4.55</b>	<b>0.21</b>	<b>Highest</b>

According to Part2, it is indicated that most of teachers and administrators rated the problems of the integration of vocational education and industry at the highest level of average score ( $\bar{X}$ ) at 4.55 (S.D.=0.21).

### 5.2 Needs of strategic guideline for the integration of vocational education and industry

Table 2 Needs of strategic guidelines for the integration of vocational education and industry

Questions	n=300		Level of needs
	$\bar{X}$	S.D.	
<b>Needs</b>			
1. You believe that the strategic guidelines for the integration of vocational education with industry is very important.	4.57	0.24	Highest
2. You believe that the strategic guidelines for the integration of vocational education with industry has a positive impact on the career development of teachers and administrators.	4.57	0.24	Highest
3. In your school, the strategic guidelines for the integration of vocational education with industry has been implemented.	4.56	0.23	Highest
4. If it has been implemented, you believe that the implementation effect of this strategy is very good.	4.59	0.25	Highest
5. You believe that the strategic guidelines for the integration of vocational education with industry helps to improve students' competitiveness in employment.	4.58	0.24	Highest
6. You believe that the strategic guidelines for the integration of vocational education with industry can promote the cultivation of students' innovation ability and practical ability.	4.57	0.24	Highest
7. You believe that the strategic guidelines for the integration of vocational education with industry plays an important role in cultivating students' professional ethics and vocational morality.	4.58	0.25	Highest
8. You believe that the strategic guidelines for the integration of vocational education with industry helps to promote cooperation and communication between schools and enterprises.	4.57	0.24	Highest
9. You believe that the strategic guidelines for the integration of vocational education with industry can solve the current problem of disconnection between education and industry.	4.57	0.25	Highest
10. You believe that the strategic guidelines for the integration of vocational education with industry can improve the quality and satisfaction of students' employment.	4.56	0.22	Highest
<b>Total</b>	<b>4.57</b>	<b>0.24</b>	<b>Highest</b>

According to Part3, it is indicated that most of teachers and administrators rated Needs of the strategic guidelines for the integration of vocational education with industry in vocational college at the highest level of average score. ( $\bar{X}$ ) at 4.57(S.D.=0.24).

### 5.3 Strategic guidelines for the integration of vocational education an industry

The formulated Strategic Guidelines for the Integration of Vocational Education and Industry consist of five distinct units, namely:

1. Examination of Vocational College Profiles
2. Assessment of Industry Profiles in the Vicinity of the College
3. Establishment of Synergies between Vocational Colleges and Industries
4. Evaluation of the Outcomes of Establishing Synergies between Vocational Colleges and Industries
5. Examination of Causal Factors and Challenges Arising from Unsuccessful Synergy Establishment between Vocational Colleges and Industries

Each of these units underwent a comprehensive evaluation process, wherein their accuracy and appropriateness were assessed by a panel of three subject matter specialists. The results of this evaluation revealed that all five units received Index of Congruence (IOC) ratings falling within the range of 0.66 to 1.00. These IOC ratings signify a high degree of alignment between the formulated strategic guidelines and the intended objectives of fostering productive integration between vocational education institutions and industries. Consequently, it can be asserted that the developed guidelines are well-suited for facilitating the establishment of fruitful partnerships between vocational education and industrial sectors.

## 6. Discussion of the Research Results

The results of this investigation have revealed the following key findings:

1. The challenges associated with the integration of vocational education with industry were assessed as being at the highest level of significance.
2. The demand for strategic directives concerning the integration of vocational education with industry was also rated at the highest level of importance.

Furthermore, the structure of the integration of vocational education with industry consists of five fundamental components:

1. Examination of vocational college profiles.
2. Examination of profiles of industries located in the vicinity of the college.
3. Establishment of connections between vocational colleges and industries.
4. Assessment of the effectiveness of establishing connections between vocational colleges and industries.
5. Analysis of the root causes and issues contributing to the failures in establishing connections between vocational colleges and industries.

Each unit underwent a rigorous evaluation process, assessed, and endorsed for its accuracy and appropriateness by a panel of three experts. The evaluation revealed that all five units received Index of Congruence (IOC) scores within the range of 0.66 to 1. These findings affirm the suitability of the developed strategic guidelines for facilitating an integration between vocational education and industries.

Based on the findings, the constructed strategic guidelines provide targeted strategies to guide the vocational college in strengthening industry partnerships, tailoring curriculum to needs, providing practical experience, and enhancing graduate employment. This research offers an example of how investigating stakeholder views can inform context-specific guidelines to integrate vocational education with industry. The strategic guidelines developed can serve as a model for vocational colleges in China seeking to improve education-industry integration based on local needs. Wider implementation may require adapting guidelines to different regional and industry contexts. Further research could entail evaluating integration outcomes after implementing the guidelines. Overall, this study contributes insights into stakeholder-informed development of practical strategic guidelines to strengthen vocational education-industry integration in China's universities.

## **7. Recommendations for Further Study**

Further research along these lines can contribute to continued progress and innovation in strengthening vocational education- industry integration to equip Chinese students with demanded skills and optimized employability.

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**A Development of a Management Guideline for the Enhancement of  
Creativeness for Students in Art Program in Middle Schools:  
A Case Study of Ganxian District Experimental School in GanZhou City in China**

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**ABSTRACT**

The objectives of this research were: 1) to investigate problems and needs of creativeness for students in art program in middle schools, and 2) to develop a management guideline for the enhancement of creativeness for students in art program in middle schools. The respondents in this research were 300 students and 40 teachers obtained through stratified random sampling at Ganxian District Experimental School as a case study. The research instruments employed in this study were a questionnaire with 30 questions for 5 rating scales and online interview. The information and data collected were analyzed and presented in terms of percentage, mean value, and standard deviation. The findings indicated that: 1) creativeness for students in art program in middle schools problems and needs of art program teachers and students at Ganxian District Experimental School were most in the “Highest” level. 2) The development of a management guideline for the enhancement of creativeness for students in art program in middle schools comprises of four units. All of the four units were evaluated for its correctness and suitability by the 3 specialists and possessed the IOC values from 0.66 to 1.0 meaning the developed management guideline for the enhancement of creativeness for students in art program in middle schools for teacher was acceptable and could be used as an art teaching management guideline in the art contexts for art teachers in Ganxian District Experimental School to enhance their art creativeness skills and competence.

**Keywords:** Development management guideline, Creativeness, Art Program, Ganxian District Experimental School.

## 1. Background

With the full implementation of quality education in China, the education reform of schools in China is also developing in the direction of knowledge is faster and faster and the update cycle is shortened. At present, there are various signs of "knowledge explosion" and "information explosion". Under the environment of the new curriculum reform, the whole society is focusing on the students' quality education, quality education embodies the nature of education and development trend, its core is to play the students' initiative, cultivate students' innovation ability, the ultimate goal is to social qualified talents, reflect their own creation value, contribute to the prosperity of the country. Therefore, cultivating students' innovation ability is the top task of the current school education reform (Ministry of Education, 2014). Comrade Jiang Zemin pointed out in his article on Science and Technology that "Innovation is the soul of a nation's progress, the inexhaustible driving force for a country's prosperity, and the source of a political party's eternal vitality. Innovation means not to emancipate the mind, seek truth from facts, and keep pace with The Times (Jiang, 2002). "Basic education in primary and secondary schools is the cradle of cultivating innovative talents. Without innovation, there is no development, which is the conclusion jointly recognized by all industries of the school and even the society (Jiang, 2002). Art education is a comprehensive discipline education, which highlights students' personal ability, encourages students' personality development, cultivates students' innovation ability and practical ability to cultivate students' keen observation, further promotes quality-oriented education, makes the level of education develop to a higher direction, and trains all-round talents for the country. Through art education, it can improve students' artistic accomplishment, promote interdisciplinary, promote the comprehensive development of students' personality and thinking, and while learning art basic knowledge and basic skills, learn to be a man, and form correct values. Its teaching is an important cultural and educational activity of human society.

## 2. Objective

- 1) To investigate problems and needs of creativeness for students in art program in middle schools.
- 2) To develop a management guideline for the enhancement of creativeness for students in art program in middle schools.

## 3. Review of Literature

### 3.1 Concepts/Theories/related/research

"Creation" is an old concept; Mr. Tao Xingzhi put forward the idea of "creation education" as early as the century. But what exactly is creative ability has not been a unified statement. Although there are various definitions of creativity, it is generally accepted that "novelty and originality" are its most prominent characteristics. Creativity is inseparable from thinking. Thinking is the indirect and general reflection of the nature

and laws of objective things in the brain with the help of language. Good thinking quality should include the broadness, depth, independence, criticality, logic, flexibility and agility of thinking. Creative thinking is the core of creative activities, it is a creative thinking, through this kind of thinking, not only can reveal the nature of objective things and their internal relations, but also, on this basis, produce new, original and socially significant thinking results. It can be seen that creative thinking is beyond the inherent traditional normal "mode", and a pioneering exploration of unknown psychological activities, is the highest form of human thinking. The index parameters to measure creative thinking are fluency, flexibility and originality. Creativity is a complex construct and is most commonly expressed through a broad range of intelligences including linguistic, musical, mathematical, spatial, kinesthetic, interpersonal, and perhaps even intrapersonal (Gardner, 1985). In a classic study of creativity (Taylor,1959). proposed the existence of five typologies for creativity. These were expressive, productive, inventive, innovative, and emerge native. Creative thinking is inseparable from imagination. Imagination is the creation of an image - or picture - in our mind. Only human beings have this impulse to create art and this aesthetic nature. Imagination is the link between consciousness and subconscious. It integrates people's personality, intelligence, spirit and emotion. It is a way of expression determined by mind and brain. Therefore, it is the most expressive artistic language, even if it is an instinctive expression, it can still achieve people's consensus and be understood to some extent.

### 3.2 Conceptual Framework

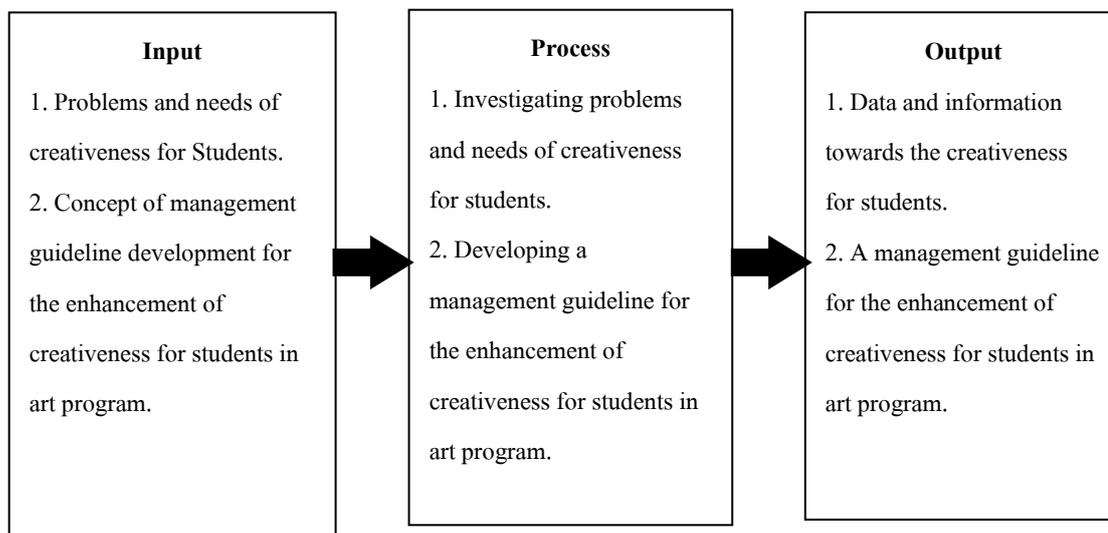


Figure 1 Conceptual Framework

## 4. Reserch methodology

### 4.1 Population /sample

In this research, Ganxian District Experimental School was used as a case study. The population in this research project was divided into 2 groups, namely; 1) 1,200 students participated in art class 2) 40 teachers who taught art in school. The sample groups were divided into 2 groups, namely: 1) 300 students participated in art

class 2) 40 teachers who taught art in school. The respondents were collected through the stratified random sampling technique.

#### **4.2 Research instrument**

The questionnaires were constructed according to the review of other relevant research papers and theories of constructing questionnaires from other related textbooks both in Chinese and English. The questionnaires were evaluated and approved in terms for correctness and suitability of the contents by the three specialists. All of the questions in the questionnaires possessed the IOC (Index of Congruence) value more than 0.67, which were acceptable for being used to collect data and information of this research.

#### **4.3 Data collection**

1.1 To collect the data and information for the investigating of the needs and problems creativeness for students in art program in middle schools, the researcher collected data by himself with e-mail questionnaire to the 300 students and 40 teachers, then all of the questionnaires were sent via e-mail back to the researcher.

1.2 To evaluate the effectiveness of the management guideline for the enhancement of creativeness for students in art program in terms of correctness and suitability of the contents by the three specialists, focus group meeting were organized. The constructed handbook possessed the IOC (Index of Congruence) value of 0.67 or more for all the four units, which were acceptable for being used as an art management guideline for the art teachers and students at Ganxian District Experimental School.

#### **4.4 Data Analysis**

The data and information were analyzed, interpreted and then presented in terms of frequency, mean ( $\bar{X}$ ), standard deviation (S.D.). The fivepoint Likert Rating Scale was used to evaluate the respondents' problems and needs of creativeness for students in art program in middle schools.

### **5. Research result**

According to table1, it can be indicated that most of the students rated the problems of creativeness in art program at the highest level of average score ( $\bar{X}$ ) at 4.60 (S.D. =0.39), teachers rated the problems of creativeness in art program at the highest level of average score ( $\bar{X}$ ) at 4.63 (S.D. =0.35). According to table 2, it is indicated that most of the students rated the needs of creativeness in art program at the highest level of average score ( $\bar{X}$ ) at 4.60 (S.D. =0.39), in the other hands, the teachers rated the needs of creativeness in art program at the highest level of average score ( $\bar{X}$ ) at 4.63 (S.D. =0.35).

Table 1 Problems of creativeness in art program for students and teachers

Questions	n=300		n=40		Level of problems
	(students)		(teachers)		
	$\bar{X}1$	S.D.	$\bar{X}2$	S.D.	
1) Teachers teach middle school design courses as a way to foster creative thinking in art learning.	4.69	0.41	4.56	0.21	Highest
2) In the art course of study, most students are not interested in the art program.	4.50	0.38	4.57	0.48	Highest
3) In the face of great pressures such as promotion and schoolwork, you think it is necessary to take art courses.	4.56	0.20	4.67	0.32	Highest
4) During in-class learning, students actively participate in the teacher's use of artwork to guide imagery.	4.64	0.37	4.59	0.55	Highest
5) In art learning, students have poor design skills.	4.56	0.50	4.69	0.45	Highest
6) Taking art classes and using innovative learning methods in learning does not help students.	4.50	0.41	4.66	0.24	Highest
7) In art learning, students are unwilling to independently create works.	4.65	0.52	4.60	0.20	Highest
8) The lack of interest in art courses is a key factor affecting the majority of students' acceptance of art course teaching.	4.55	0.44	4.63	0.20	Highest
9) At the end of the art program learning, students did not follow art-related media channels.	4.58	0.42	4.68	0.47	Highest
10) Art learning and hands-on practice can improve students' innovative thinking ability.	4.66	0.20	4.59	0.47	Highest
<b>Total</b>	<b>4.60</b>	<b>0.39</b>	<b>4.63</b>	<b>0.35</b>	<b>Highest</b>

**Table 2** Needs of creativeness in art program for students and teachers

Questions	n=300		n=40		Level of problems
	(students)		(teachers)		
	$\bar{X}_1$	S.D.	$\bar{X}_2$	S.D.	
1) During the art learning process, students need to take a middle school design course to develop creative thinking.	4.69	0.20	4.50	0.40	Highest
2) During the art learning process, most students need to be interested in the art program.	4.55	0.51	4.57	0.37	Highest
3) Faced with enormous pressures such as further education and coursework, it is necessary to reform the learning of Art.	4.56	0.33	4.59	0.20	Highest
4) In the classroom learning, students need to be actively involved in the teacher's use of artwork to guide their imaginations.	4.64	0.57	4.59	0.35	Highest
5) In art learning, need to improve students' design ability.	4.56	0.47	4.69	0.47	Highest
6) In art classes, students need to use innovative learning methods in their learning.	4.58	0.28	4.66	0.42	Highest
7) In art learning, students need to independently create works.	4.65	0.21	4.60	0.52	Highest
8) The art program learning requires the development of student interest.	4.55	0.21	4.68	0.43	Highest
9) In art learning, students need channel follow art related media.	4.58	0.48	4.67	0.41	Highest
10) In art learning, students need to practice and cultivate innovative thinking.	4.66	0.51	4.68	0.20	Highest
<b>Total</b>	<b>4.60</b>	<b>0.39</b>	<b>4.62</b>	<b>0.35</b>	<b>Highest</b>

**5.3 A management guideline** including four units, namely; unit 1 Springwood is creative labo; unit 2 The Imagination of Spring; unit 3 Energetic Sports Day; unit 4 School Arts Festival. All the four units evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.67 to 1.00 meaning the developed management guideline for the enhancement of creativeness for students in art program in middle schools for teacher was acceptable and could be used as an art teaching management guideline in the art contexts for art teachers in Ganxian District Experimental School to enhance their art creativeness skills and competence.

## **6. Discussion of the Reasearch Resultls**

### **6.1 Needs and Problems of Creativeness for Students in Art Program in Middle Schools.**

The findings from the investigation of Creativeness for Students in Art Program in Middle Schools in Ganxian area of Ganxian District Experimental School in terms of Art program terms of were all in the “Highest” level indicating that the Art instructors in the educational levels. It is correspondent with Starko (2021). The findings include that creativity in the classroom helps teachers link creativity research and theory to the everyday activities of classroom teaching. Ideal reading for any course dealing wholly or partially with creativity and teaching, this foundational textbook covers definitions, research, and theory in the first half and reflects on classroom practices in the second. Thoroughly revised and updated. the seventh edition features new research on neuroscience and creativity in specific disciplines: new sections on social –emotion learning, teaching engineering, and leadership; and an entire new chapter on building creativity at the school or district level.

**6.2 A management guideline for the Enhancement of Creativeness for Students in Art Program in Middle Schools.** The contents in each unit focusing on Art Program in Middle Schools the extracted from referable and reliable sources and were then simplified to be suitable for the knowledge level for Art Program learners. The part of practice in the Art Program handbook in the contexts for the art teachers in Ganxian focus on practicing and enhancing Art Program skills for comprehension of describing the details and information from the practice correctly and clearly. The contents of all practices encouraging learners to study Art Program well. And the learners must be able to apply the knowledge obtained from the exercises to the real situations. The learner’s activities in the part of Art Program creative skills comply with one of the traditional ways which is the Art Program creative method by encouraging learners to understand and memorize the Art Program creative. This is correspondent with Starko, A. J. (2021). this helps the learners practice and develop their intelligence and competency in Art Program. For students, to participate in Art Program creative teaching, they must learn to adjust their mentality, understand that art teaching is not a holiday, and must adapt to the home learning environment; at the same time, parents should also provide certain supervision and guidance within their capabilities.

## **7. Rescommendation for futher study**

1) Research on the evaluation towards for effectiveness for the Art Program handbook in the contexts for the Art Program teachers in Ganxian must be executed.

2) Teachers should be guidance to students to strengthen their understanding of graphic creativity and make them more adept at discovering all kinds of creative works in life.

## **8. Acknowledgement**

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The next one should be the three specialists to evaluate the competence and correctness of the questionnaire and handbook. And I also need to say many thanks to President Asst. Prof. Dr. Yuwalak Vejwitayaklung accept me as a student at Dhonburi Rajabhat University

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**Developing Strategic Guidelines for the Integration of Traditional and Modern Mathematics Subjects for Primary School Students: A Case Study of Hangzhou Jinxiu Yucai Middle School Affiliated School in China**

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**ABSTRACT**

The objectives of this research were: 1) to investigate problems of teaching Mathematics and Traditional Subjects in Primary school, 2) to investigate needs of the integration of mathematics and traditional subjects in primary school and, 3) to develop strategic guidelines for the integration of mathematics and traditional subjects for primary school students. In this study, Hangzhou Jinxiu Yucai middle School Affiliated School was used as a case study. For the investigation of problems and needs, the population were divided into 2 groups; namely, 1) 2,000 students in the 2023 academic year and 2) 28 teachers and administrators of the school. The sample groups for the investigation of problems and needs were divided into 2 groups; namely, 1) 333 students and 2) 28 teachers and administrators. Moreover, the 3 specials were used for the focus group discussion meeting. The research instrument employed in this study were questionnaires and a set of questions for the focus group discussion meetings. The information and data collected were analyzed through the content analysis method and presented in terms of frequency count, mean values, standard deviation. The Likert rating scales were used to rate the degree or level of problems and needs. The findings indicated that: 1) problems of teaching Mathematics and Traditional were in the "Highest" level, 2) needs of the integration of mathematics and traditional subjects in primary school were also in the "Highest" level. The strategic guidelines for the integration of " Traditional " and the Mathematics

Courses comprises of 5 units; namely, 1) Integrate the introduction traditional mathematicians into modern mathematics teaching; 2) Integrate the traditional number concepts and thinking methods into modern mathematics teaching; 3) Integrate classic mathematics problems into In modern mathematics teaching, 4) integrate traditional calculation formulas into Chinese modern mathematics teaching, and 5) integrate traditional mathematical symbols into modern mathematics teaching. All the five units were evaluated and approved by the three specialists in terms of correctness and suitability of the contents and possessed the IOC values ranging from 0.66 to 1.0. It can be assumed that the strategic guidelines is suitable to be used as guidelines for the integration the of " Traditional " and Mathematics Courses.

**Keywords:** Strategic Guidelines, Integration of Traditional and Mathematics, Primary School Students

## 1. Background

The integration of traditional mathematics into teaching is in line with quality education and new curriculum reform requirements for talents"; "It can inspire the young generation to follow the law of historical development, abandon the ideas and methods of the previous generation of mathematicians (Zhang Mingyue, 2012), and make due contributions to the mathematical cause of all mankind," This will help "mathematics classes to reflect more appropriately the important role of the social needs of mathematics in promoting the development of mathematics". From a micro point of view, the integration of the traditional mathematics into mathematics teaching is beneficial to classroom teaching, teachers and students. For classroom teaching and students, "enriching the boring mathematical problem solving process with traditional anecdotes will greatly increase students' interest in learning;" In addition, "it also extends the breadth and depth of the classroom and increases the knowledge capacity;" "Prompting students to understand the ins and outs of knowledge in sorting out the traditional lineage, the classroom teaching link is more clear and organized ;" (Shen Lixia, 2007) "It is beneficial for students to learn how to solve mathematical problems in the context of traditional problems, deepen their understanding of knowledge, learn from traditional mathematics, cultivate critical ability, and enhance their comprehensive literacy."

## 2. Objectives

1.To investigate problems of teaching Traditional and Modern Mathematics Subjects for Primary School Students

2.To investigate needs of the integration of Traditional and Modern Mathematics Subjects for Primary School Students

3. To develop strategic guidelines for the integration of Traditional and Modern Mathematics Subjects for Primary School Students

### 3. Review of Literature

#### 3.1 Concepts/Theories/Related Research

" Traditional mathematics in the classroom" is a compound word consisting of " traditional mathematics" + "integration" + "classroom teaching". ". The two subjects of "integration" are " traditional mathematics" and "classroom teaching", where "classroom teaching" refers specifically to "classroom teaching". The term "classroom teaching" here refers specifically to "mathematics classroom teaching". According to Hao Ying and Zhang Yanxia (2015), "the integration of the traditional mathematics into classroom teaching means that the teacher reprocesses the relevant historical materials of mathematics according to the content of teaching and makes them creatively transformed into an organic part of the content of mathematics teaching." On the basis of summarizing the previous research, Zhang Junzhong (2015) gives a more systematic definition of "integrating the traditional mathematics into mathematics teaching", which means that "according to the cognitive characteristics and inherent developmental needs of students, in the process of mathematics education and teaching, the relationship between the history of mathematics and various elements of mathematics education can be understood and explored from the perspectives of history generation and development".

#### 3.2 Conceptual Framework

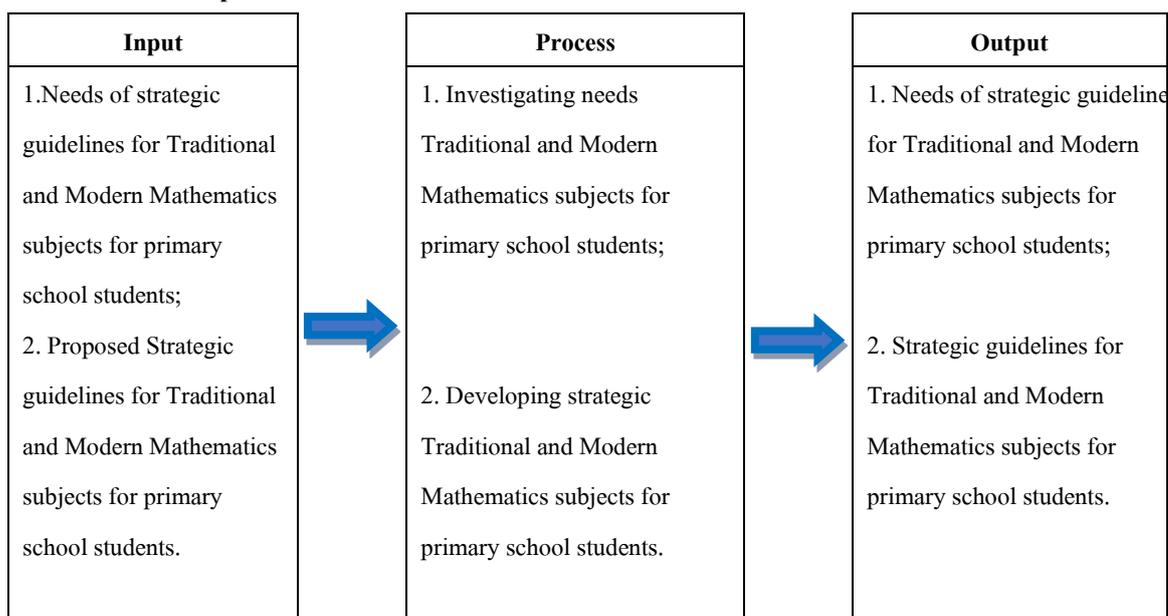


Figure 1 Conceptual Framework

### 4. Research methodology

#### 4.1 Population/Sample groups

**Population:** Hangzhou Jinxiu Yucai middle School Affiliated School was used as a case study. In this study, the population were divided into 2 groups; namely, 1) 2,000 students in academic year 2023 (Hangzhou Jinxiu Yucai middle School Affiliated School, 2023) and 2) 28 teachers and school administrators.

**Samples Groups:** the sample groups in this study were divided into 2 groups: namely, 1) 333 students (Yamane, 1973) and 2) 28 teachers and school administrators. The sample groups were obtained through stratified random sampling technique.

#### **4.2 Research Instruments**

1) Questionnaires: In this research project, a questionnaire was employed for the data collection. The questionnaire was divided 3 parts; namely, 1) problems of teaching traditional and modern mathematics Subjects for Primary school, and 2) needs the integration of traditional and modern mathematics subjects in primary school. The questionnaire was evaluated for its validity by the Index of Congruence (IOC) by the three specialists. Each question in the questionnaire was in the range of IOC 0.66 to 1.00. In addition, the questionnaire was evaluated for its reliability by the Alpha Cronbach Coefficient with the value of 0.83.

2) A set of questions for the focus group discussion meeting: To develop strategic guidelines for the integration of traditional and modern mathematics subjects for primary school students, a set of questions for the focus group discussion meeting. The 3 specialists were invited to participate in the 3 focus group discussion meetings to recruit ideas, suggestions and comments for the correctness and suitability of the strategic guidelines. The correctness and suitability of the strategic guidelines were evaluated in terms of IOC at the range of 0.66 to 1.0.

#### **4.3 Data collection**

For the investigation of problems and needs, the researcher himself collected the data and information from the sample groups online via emailing. Moreover, the three focus group discussion meetings were conducted to recruit the comments, ideas and suggestions for the correctness and improvement of the strategic guidelines.

#### **4.4 Data Analysis**

1) For the investigation of problems and needs, the Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems. For the rating reference table of The Five Point Likert Rating Scale, see table 3.1

2) For the correctness and improvement of the strategic guidelines, the ideas, suggestions and comments of the 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the guidelines.

## 5. Research Results

### 5.1 Problems of teaching/learning Traditional and Modern Mathematics Subjects for Primary school

#### 1) Problems of learning Traditional and Modern Mathematics Subjects in Primary school

Table 2: Problems of learning Traditional and Modern Mathematics Subjects in Primary school (Students)

Questions	n=333		Level of Problems
	$\bar{x}$	S.D.	
1) Your teacher doesn't think Traditional mathematics influences the field of modern mathematics teaching.	4.53	0.20	Highest
2) Your teacher doesn't think that the different branches of mathematics developed over time.	4.58	0.48	Highest
3) Your teacher doesn't think that some traditional event or mathematician had a significant impact on the development of mathematics.	4.61	0.33	Highest
4) Your teacher doesn't think that some traditional event or mathematician had a significant impact on the development of mathematics.	4.56	0.57	Highest
5) Your teacher doesn't think the traditional mathematics reflects social, cultural and technological change.	4.63	0.47	Highest
6) Your teacher doesn't think students have an emotional connection to learning about the traditional mathematics.	4.51	0.27	Highest
7) There are some stories or characters in the traditional mathematics that Your teacher doesn't find particularly inspiring.	4.53	0.21	Highest
8) Your teacher doesn't think that studying the traditional mathematics is about helping students better understand the development of mathematics.	4.61	0.21	Highest
9) Your teacher doesn't think that any student would be more motivated and engaged in mathematics because they learned the traditional mathematics.	4.67	0.48	Highest
10) Your teacher doesn't think that any student would be more motivated and engaged in mathematics because they learned the traditional mathematics	4.62	0.37	Highest
Total	4.63	0.39	Highest

It can be seen from Table 2 that most of the students evaluated the problems existing in the integration of " traditional mathematics " into the mathematics compulsory course The average score is the highest level (= 4.63, S.D. = 0.39).

**2) Problems of teaching Traditional and Modern Mathematics Subjects in Primary school.**

Table 3: Problems of teaching Traditional and Modern Mathematics Subjects in Primary school. (Teachers)

Questions	n=333		Level of Problems
	$\bar{x}$	S.D.	
1) You don't think the traditional mathematics doesn't influence the field of modern mathematics teaching	4.54	0.21	Highest
2) You don't think that the different branches of mathematics developed over time.	4.57	0.47	Highest
3) You don't think that some traditional event or mathematician had a significant impact on the development of mathematics.	4.62	0.34	Highest
4) Does the traditional mathematics help us better understand the thought processes and innovations of great mathematicians.	4.55	0.56	Highest
5) You don't think the traditional mathematics reflects social, cultural and technological change	4.66	0.49	Highest
6) You don't think students have an emotional connection to learning about the traditional mathematics.	4.49	0.25	High
7) There are some stories or characters in the traditional mathematics that you don't find particularly inspiring	4.56	0.24	Highest
8) You don't think that studying the traditional mathematics is about helping students better understand the development of mathematics	4.58	0.20	Highest
9) You don't think that any student would be more motivated and engaged in mathematics because they learned the traditional mathematics	4.56	0.47	Highest
10) You don't think that any student would develop a greater interest in the subject of mathematics because of their admiration for traditional mathematicians.	4.61	0.36	Highest
Total	4.60	0.39	Highest

According to table 3 , it can be seen that the majority of teachers rated the inclusion of "traditional mathematics" questions in compulsory mathematics as the highest level (mean score = 4.60, S.D. = 0.39).

**5.2 Needs of the integration of traditional and modern mathematics subjects in primary school.**

**1) Needs of the integration of " traditional mathematics " into the mathematics compulsory courses in the opinions of students**

Table 4: Needs of the integration of " traditional mathematics " into the mathematics compulsory courses in the opinions of students

Questions	n=400		Level of needs
	$\bar{x}$	S.D	
1) The field of modern mathematics teaching especially needs the integration of the traditional mathematics.	4.74	0.41	Highest
2) Different branches of mathematics need to develop over time.	4.56	0.38	Highest
3) The development of mathematics requires some traditional events or mathematicians to develop significant changes.	4.66	0.20	Highest
4) Students need to go through the traditional mathematics to better understand the thought processes and innovations of great mathematicians.	4.54	0.37	Highest
5) Social, cultural, and technological change requires the traditional mathematics to respond.	4.66	0.50	Highest
6) Students learning mathematics has an emotional resonance and requires a traditional mathematics.	4.65	0.41	Highest
7) Stories and characters from the traditional mathematics are especially needed to inspire.	4.55	0.52	Highest
8) To better understand the development of mathematics, students need to study the traditional mathematics.	4.75	0.44	Highest
9) Students are more actively involved in mathematics learning and need to integrate the traditional mathematics.	4.78	0.42	Highest
10) Students developing greater interest in the subject of mathematics need mathematicians as role models.	4.63	0.20	Highest
<b>Total</b>	<b>4.62</b>	<b>0.37</b>	<b>Highest</b>

As can be seen from Table 4, most students rated the need for traditional of mathematics as the highest average score (=4.62, S.D.=0.378).

**2) Needs of the integration of " traditional mathematics " into the mathematics compulsory courses in the opinions of teachers**

Table 5: Needs of the integration of " traditional mathematics " into the mathematics compulsory courses in the

Questions	n=400		Level of needs
	$\bar{x}$	S.D.	
1) The field of modern mathematics teaching especially needs the integration of the traditional mathematics.	4.74	0.41	Highest
2) Different branches of mathematics need to develop over time.	4.56	0.38	Highest
3) The development of mathematics requires some traditional events or mathematicians to develop significant changes.	4.66	0.20	Highest
4) Students need to go through the traditional mathematics to better understand the thought processes and innovations of great mathematicians.	4.54	0.37	Highest
5) Social, cultural, and technological change requires the traditional mathematics to respond.	4.66	0.50	Highest
6) Students learning mathematics has an emotional resonance and requires a traditional mathematics.	4.65	0.41	Highest
7) Stories and characters from the traditional mathematics are especially needed to inspire.	4.55	0.52	Highest
8) To better understand the development of mathematics, students need to study the traditional mathematics.	4.75	0.44	Highest
9) Students are more actively involved in mathematics learning and need to integrate the traditional mathematics.	4.78	0.42	Highest
10) Students developing greater interest in the subject of mathematics need mathematicians as role models.	4.63	0.20	Highest
Total	4.62	0.37	Highest

It can be seen from Table 4.6 that most teachers evaluated the need for " traditional " to be integrated into the mathematics compulsory course The mean score was the highest level (= 4.62, S.D. = 0.378).

### 5.3 The development of strategic guidelines for the integration of traditional and modern mathematics subjects for primary school students

The five-unit mathematics compulsory course " Traditional mathematicians " is integrated into the construction guide: 1) Integrate the introduction traditional mathematicians into modern mathematics teaching; 2) Integrate the traditional number concepts and thinking methods into modern mathematics teaching; 3) Integrate classic mathematics problems into In modern mathematics teaching, 4) integrate traditional calculation formulas

into Chinese modern mathematics teaching, and 5) integrate traditional mathematical symbols into modern mathematics teaching. All five units were assessed by three experts for the correctness and applicability of the content, expressed as IOC (Index of Consistency) values. All five units were assessed with an IOC value between 0.66 and 1.0, meaning that the "traditional Mathematics" Convergence guidelines developed were acceptable as a compulsory course in Mathematics.

## **6. Discussion of the Research Results**

According to the results from this study, it can be concluded that most of the students rated the problems of learning Traditional and Modern Mathematics Subjects for Primary school at the "Highest" level ( $x= 4.63$ ,  $S.D. = 0.39$ ). Similarly, most of the teachers/school administrators rated the problems of teaching Traditional and Modern Mathematics Subjects for Primary school at the "Highest" level ( $x= 4.60$ ,  $S.D. = 0.39$ ). This might be because teaching and learning Mathematics needs a lot of skills concerning calculations and lots of numbers; on the other hand, teaching and learning Traditional Mathematics needs lots of memorization, plenty of events, years of events and names of people. According to the results from this study, it can be concluded that most of the students rated the needs of the integration of Traditional and Modern Mathematics Subjects in Primary school at the "Highest" level ( $x= 4.62$ ,  $S.D. = 0.378$ ). Similarly, most of the teachers/school administrators rated the needs of the integration of Traditional and Modern Mathematics Subjects in Primary school at the "Highest" level ( $x= 4.60$ ,  $S.D. = 0.39$ ) This might be because the understanding of mathematical knowledge needs to be built on the process of its development. Students understand the source of knowledge, which is conducive to students' better application of knowledge to solve practical problems in life. Traditional has recorded some wisdom in people's lives, helping people to reflect and improve. Both mathematics and Traditional are indispensable knowledge to promote human progress. According to the results from this study, the strategic guidelines for the integration of Traditional and Modern Mathematics Subjects for Primary school composes of five units; namely, 1) Integrate the introduction traditional mathematicians into modern mathematics teaching; 2) Integrate the traditional number concepts and thinking methods into modern mathematics teaching; 3) Integrate classic mathematics problems into In modern mathematics teaching, 4) integrate traditional calculation formulas into Chinese modern mathematics teaching, and 5) integrate traditional mathematical symbols into modern mathematics teaching. All the five units were assessed by the three specialists for the correctness and suitability of the contents and possessed the IOC (Index of Consistency) values in the range from 0.66 to 1.0, meaning that the developed strategic guidelines were acceptable and could be used as guidelines for the integration of Traditional and Modern Mathematics courses for primary school.

## **7. Recommendations for Further Study**

The evaluation of the effectiveness of the strategic guidelines for the integration of Traditional and Modern Mathematics courses needs to be executed.

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**A Construction of a handbook for home-study of mathematics subject for elementary school students: A Case Study of Hangzhou Xuejun primary school in China**

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**ABSTRACT:**

The objectives of this research were: 1) To investigate problems of Mathematics learning of elementary school students. 2) To investigate needs of handbook for home-study of mathematics subject for elementary school students. 3) To develop a handbook for home-study of mathematics subject for elementary school students. The population and respondents in this research were divided into 2 groups; namely, 1) 1000 students and their parents (Yamane, 1973) and 2) 25 maths teachers and administrators in XueJun Primary School. The research instruments employed in this study were questionnaires and a set of questions for focus group discussion meetings. The information and data collected were analyzed through the content analysis method and presented in terms of frequency count, mean values, standard deviation and Likert rating scales. The findings indicated that: 1) problems of home-study of mathematics subjects were in the "Highest" level, 2) needs of the integration of home-study of mathematics subjects in primary school were also in the "Highest" level. The strategic guidelines for home-study of Mathematics subject for elementary school students comprises of 6 units; namely, 1) Homework under the "double-decrease" system. 2) Reasonable and skilful design of homework. 3) Reflection on teaching performance. 4) Fundamental exercises. 5) Extended training. 6) Teacher counselling. All of the 6 units were evaluated and approved for the correctness and suitability by the three mathematics specialists in terms of IOC score. It was found the IOC scores for all the 6 units were in the range of 0.66 to 1.00. It can be assumed

that the strategic guidelines is suitable to be used as guidelines for home-study of Mathematics subject for elementary school students.

**Keywords:** Handbook, home-study, mathematics subject, elementary school students.

## 1. Background

At present, the main features of homework design for primary school mathematics in China include: firstly, the types of questions are simple, with too many imitation questions and fewer innovative ones. Students can simply repeat or even cope with the questions, which cannot consolidate their knowledge, let alone cultivate their ability to learn by example and innovation. Secondly, there are too many simple calculation questions and fewer application and differentiation questions. Students learn more boring numerical calculations rather than experiencing the connection between mathematics and real life, which is obviously not conducive to the establishment of a "sense of numbers" and the enhancement of practical application skills. Third, there are more traditional questions that require individual completion, and fewer questions that urge parents to actively participate and practice teamwork (Hu, 2007; Ding and Ye, 2009; Guo, 2016; Liu, 2017).

The curriculum reform, in the process of changing the structure of the curriculum, stresses the need to pay attention to the developmental needs of different regions and students; in the subject of Mathematics, for example, homework in Mathematics is an important part of Mathematics teaching and learning, and it is an important method of consolidating classroom teaching and of improving the performance of the students.

## 2. Objectives.

- (1) To investigate problems of home-study of Mathematics subject of elementary school students.
- (2) To investigate needs of home-study of Mathematics subject of elementary school students.
- (3) To develop strategic guidelines for home-study of mathematics subject for elementary school students.

## 3. Review of Literature

### 3.1 Concepts/Theories/Related Research

The Dictionary explains it as "activities carried out to fulfil set tasks in production, study, etc.". The Dictionary of Education divides homework into classroom homework and extracurricular homework. Classroom homework refers to the homework assigned by the teacher and completed by the students in the classroom. Homework is the learning tasks assigned to students by teachers outside the classroom (1989). Its research covers the quantity, purpose, skill needs, difficulty design, completion date, social background of homework (2006). Generally speaking, foreign studies mainly focus on the effects of homework on students' academic achievement (homework-academic achievement) and the factors affecting it (homework factors). Walberg and Paschal (1995), Cooper et al, Walberg and Paschal (1995), Cooper et al. (2006), Hattie and Clinton (2001), and Trautwein (2007)

explicitly state that homework significantly enhances academic achievement, but empirical results are inconsistent (1998); Trautwein and Köller (2003) found that homework had a significant effect on academic achievement in the upper grades. trautwein and Köller (2003) elevated the relationship to theories of instructional time, self-regulation, and expectancy, and discussed the methodological use of nested data under a multilevel model.Used a meta analysis to comb through the literature in the US between 1987 and 2003, found that homework had a significant positive effect on student achievement, more so for students in grades 7-12. Henderson (2011) and Grodner and Rupp (2013) finding that homework has a significant positive impact on secondary school maths grades and university grades as measured by GPA, respectively. Kalenkoski and Pabilonia (2016), using data from the United Nations Child Development Supplement and Transition to Adulthood Survey UNCDS, which differed from previous retrospective questionnaires, found a different conclusion. conclusion that there is no significant relationship between homework and academic performance (GPA) at the high school level. The factors influencing homework are many and varied, with older literature focusing on the intensity of homework time, student characteristics, placement strategies, parental attitudes towards homework, and parental attitudes towards homework.

**Conceptual Framework**

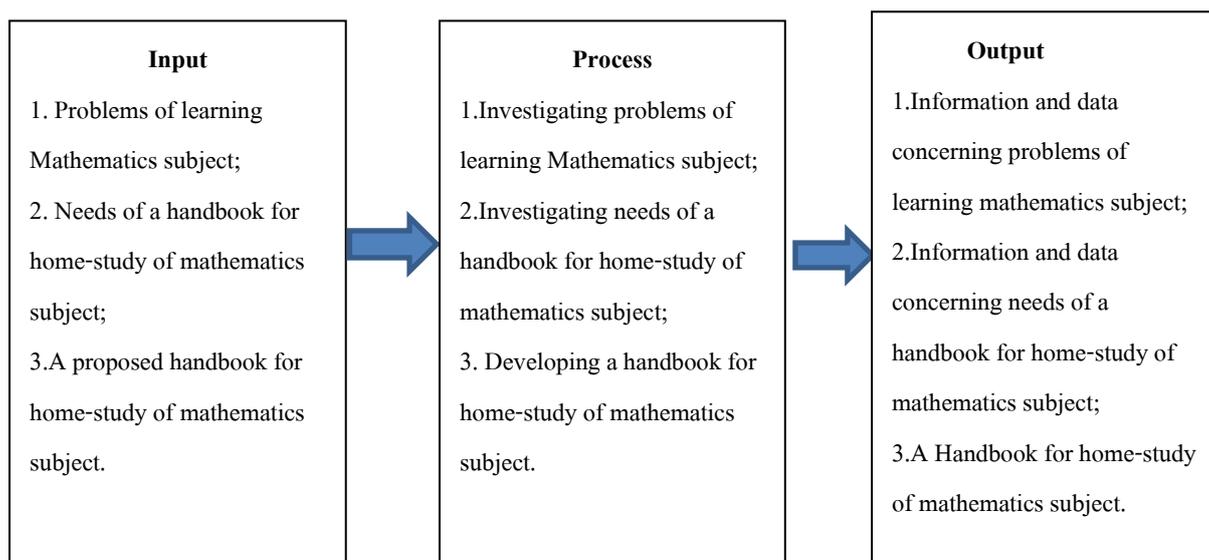


Figure 1 Conceptual Framework

**4. Research Methodology**

**4.1 Population /Sample**

**Population:** HangZhou XueJun primary school was used as a case study. In this study, the population were divided into 2 groups; namely, 1) 1000 students from grade 1 to 6, and 2) 25 mathematics teachers and school administrators in 2023.

**Samples Groups:** For the investigation of problems and needs, the sample groups were divided into 2 groups; namely, 1) 286 students (Yamane, 1973). 2) 25 mathematics teachers and school administrators in 2023.

The sample groups were obtained through stratified random sampling technique. Moreover, the 3 specialists were used for the focus group discussion meetings to gain ideas, comments and suggestions for the development of the handbook.

#### **4.2 Research Instrument**

1) For the investigation of problems and needs, questionnaire was used as a research instrument. There were 2 sets of questionnaires for the two sample groups, students group and teachers group. The questionnaire was divided into 3 sections; namely, 1) general information, 2) problems of mathematics learning of elementary school students, and 3) needs of handbook for home-study of mathematics subject for elementary school students. The questionnaire was evaluated for its validity by the Index of Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire were evaluated with the range of IOC 0.66 to 1.00. Moreover, the alpha Cronbach was used to evaluate the reliability of the questionnaire. The reliability value was 0.82.

2) A set of questions for focus group this discussion meeting. The construct handbook will be evaluated by the three specialists (one Thai and two English native speakers), and the three specialists will be invited for three focus group discussion meeting, the results will be presented in terms of IOC (Index of Congruence).

#### **4.3 Data Collection**

For the investigation of problems and needs, the researcher himself collected the data and information from the sample groups by "Questionnaires" APP. Moreover, the three focus group discussion meetings were conducted to recruit the comments, ideas and suggestions for the correctness and improvement of the strategic handbook.

#### **4.4 Data Analysis**

1) For the investigation of problems and needs, the Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean, standard deviation (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems. For the rating reference table of The Five Point Likert Rating Scale, see table 1.

2) For the correctness and improvement of the strategic guidelines, the ideas, suggestions and comments of the 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the handbook.

## 5. Research Results

### 5.1 Problems of Mathematics teaching/learning of elementary school students

#### 1) Problems of Mathematics learning of elementary school students

Table 1 Problems of Mathematics learning of elementary school students

Questions	N=286		Level of problems
	$\bar{x}$	S.D.	
1.You don't think it is important to set mathematics homework properly.	4.65	0.51	Highest
2.There shouldn't be homework for students under the "double-decrease" system.	4.63	0.56	Highest
3.You don't need help for your homework exercises you don't understand	4.62	0.21	Highest
4.You don't pay attention to the length of time it takes students to complete their mathematics homework.	4.25	0.31	Highest
5.You are not very concerned about your learning achievement.	4.47	0.31	Highest
6. You can't insist on revising your home work at least 2 times a day.	4.62	0.38	Highest
7.You can't consistently do your homework 2 or more times a day.	4.61	0.33	Highest
8. You can't still be patient when you get home from school with lots of homework.	4.56	0.27	Highest
9. You attend based on just grades.	4.59	0.42	Highest
10.You are assigned a lot of mathematics homework every-day.	4.61	0.37	Highest
Total	4.56	0.36	Highest

It can be seen from Table 1 that most of the students evaluated the problems existing in taking the mathematics learning into the mathematics compulsory course The average score is the highest level (= 4.56, S.D. = 0.36).

**5.2 Problems of Mathematics teaching of elementary school (teachers)****2) Problems of Mathematics teaching of elementary school students (teachers)**

Table 2 Problems of Mathematics teaching of elementary school (teachers)

Problems	N=25		Level of problems
	$\bar{x}$	S.D.	
1. Your elementary school doesn't attach great importance to the development of a Handbook for Home-Study of Mathematics Subject.	4.68	0.38	Highest
2. You don't think it is necessary to improve the standard of homework design by mathematics teachers	4.66	0.33	Highest
3. You don't think homework is important for students to revise their study	4.65	0.44	Highest
4. You won't actively to help students with homework exercises they don't know.	4.45	0.57	Highest
5. You can't still be patient when you get home from school, answering questions students have about their homework and guiding them through their assignments online.	4.46	0.52	Highest
6. You don't think it is important to set mathematics homework properly.	4.56	0.35	Highest
7. You don't think it is necessary to assign homework of different levels of difficulty according to students' mathematics achievement levels.	4.62	0.29	Highest
8. You can't insist on revising the student's home work at least 2 times a day.	4.52	0.31	Highest
9. You don't treat your students differently based on grades.	4.56	0.37	Highest
10. You are not very concerned about students' learning and living conditions.	4.60	0.31	Highest
Total	4.11	0.38	Highest

According to table 2, it can be seen that the majority of teachers rated the inclusion of home-study of mathematics learning questions in compulsory mathematics as the highest level (mean score = 4.11, S.D. = 0.38). Table 2 Needs of Mathematics learning of elementary school students

## 1) Needs of the Mathematics learning of elementary school students

Table 3: Needs of the Mathematics learning of elementary school students

Questions	n=286		Level of needs
	$\bar{x}$	S.D.	
1.You need help for your homework exercises you don't understand	4.67	0.33	Highest
2.You think homework is important for students to revise their study.	4.66	0.25	Highest
3.Your teachers are always patient and attentive in answering questions for your students.	4.65	0.54	Highest
4.You attend based on knowledge as well as grades.	4.36	0.46	Highest
5.You think it is necessary to improve the standard of homework design by mathematics teachers.	4.45	0.55	Highest
6. There should be homework for students under the “double-decrease” system.	4.60	0.37	Highest
7. You think it is important to math teacher set mathematics homework properly.	4.55	0.54	Highest
8. You can consistently do your homework 2 or more times a day.	4.57	0.46	Highest
9. You and the teacher get along well with each other.	4.52	0.30	Highest
10. Your mathematics teacher is your life mentor.	4.53	0.39	Highest
Total	4.55	0.42	Highest

As can be seen from Table 3, most students rated the need of learning for home-study of mathematics of students as the highest average score ( $=4.55$ ,  $S.D.=0.42$ ).

Table 4 Needs of Mathematics teaching of elementary school teachers .

Questions	N=25		Level of needs
	$\bar{x}$	S.D.	
1.You care about your test scores.	4.67	0.44	Highest
2.Your teachers are always patient and attentive in answering questions for your students.	4.66	0.25	Highest
3.You think homework is important for students to revise their study.	4.65	0.54	Highest
4.You need to be able to always be patient and attentive to your students' questions and concerns.	4.45	0.36	Highest

5. You and your students are good teachers and friends	4.45	0.42	Highest
6. Your students pay attention to the length of time it takes to complete their mathematics homework.	4.51	0.23	Highest
7. It is necessary to have homework of different levels of difficulty according to students' mathematics achievement levels.	4.57	0.24	Highest
8. You support not assigning homework to students under the "double-decrease" system.	4.58	0.35	Highest
9. You need to actively help students with homework they can't do.	4.57	0.33	Highest
10. You are very concerned about students' learning and living conditions	4.55	0.43	Highest
Total	4.57	0.36	Highest

It can be seen from Table 4 that most teachers evaluated the need of learning for home-study of mathematics of students ,the mean score was the highest level (= 4.57, S.D. = 0.36).

### 5.3 A handbook for Home-Study of Mathematics Subject for Elementary School Students

The Handbook on Home Learning in Mathematics consists of seven units: 1) Homework under the "double-decrease" system, 2) Reasonable and skilful design of homework, 3) Reflection on teaching performance, 4) Fundamental exercises, 5) Extended training, 6) Teacher counselling. Each unit consists of an introductory section, subject-based exercises and FAQs, and extended training. In addition, each unit consists of two revision passages, each followed by several questions for students to consolidate their practice. In addition, each passage has a corresponding answer key for parents to guide their children. All six units were assessed in terms of content correctness and appropriateness by three Mathematics subject specialists (one Thai professor and two native English speakers) and presented in terms of IOC (Index of Consistency) values. The IOC values for all seven modules ranged from 0.66 to 1.00, which means that the guided Home Learning Manual for Mathematics is acceptable as a practical guide for instructing children to improve the effectiveness of their mathematics homework.

## 6. Discussion of the Research Results

According to the results from this study, it can be concluded that most of the students rated the problems of Mathematics learning of elementary school students at the "Highest" level ( $\bar{x} = 4.57$ , S.D. = 0.47). Similarly, most of the teachers/school administrators rated the problems of Mathematics learning of elementary school teachers at the "Highest" level ( $\bar{x} = 4.56$ , S.D. = 0.36). This might be because teaching and learning Mathematics needs a lot of skills concerning calculations and lots of numbers.

The overall findings in this research is that needs of parents' involvement in primary school students' home mathematics homework from the home-school under the perspective of home-school cooperation were all in the "Highest" level, respectively ( $\bar{X}$ =4.59, S.D.=0.39), ( $\bar{X}$ =4.57, S.D.=0.47) from the perspective of parents and ( $\bar{X}$ =4.57, S.D.=0.39), ( $\bar{X}$ =4.56, S.D.=0.36) from the perspective of teachers, indicating that parents have great needs of teachers' guidance and there are many problems in homework participation of primary school students.

The results was relevant to the one of Lan Yueliang 's (2021) researches in that he found that some parents pay less attention to participate in home-study, which makes their children' homework activities method is not rigorous science, perfunctory and makes home-study activities become a mere formality. The findings was also relevant to Huang xiaobo (2023) research who concluded that some parents attach great importance to their children's examination results, but are unable to distinguish between priorities when it comes to monitoring and managing their students' home-study.

## **7. Recommendation for Further Study**

1) A research on the evaluation towards for effectiveness for the handbook for home-study of mathematics subject for elementary school students' learning ability in mathematics homework in Xue Jun Primary School in Xi Hu District, Hangzhou for parents must be executed.

2) A research of factors affecting the competence of primary school students' learning ability especially from the fifth grade onwards in mathematics homework in Hangzhou must be executed.

## **8. Acknowledgement**

I would deeply appreciate my major thesis advisor Dr.Kris Phattaraphakin and my co-advisor Dr. Kitpinit Usahol Ph. D. For their professional guidance, and inspiration. Their extensive professional knowledge, rigorous attitude to learning, excellent working style, high morality of teaching, strict discipline and generosity to others have had a profound impact on me. And grateful to all the Independent Study defense committee, including Dr.Kris Phattaraphakin, Dr. Kitpinit Usahol Ph. D, and Dr. Piraprob Chansaentor. Their meticulous approach to work and study has always been a role model for me, and their kind teaching and unconventional thinking has been an inspiration to me. Dr.Yuwalak Vejwitayaklung, for providing us with this wonderful place to study, I have been given selfless help and enthusiastic care in my studies, in my life and in my work. I would extend my profound appreciation to Mr. Feng, director of college, for allowing me to conduct my thesis in this primary school and all the parents and teachers are positively fill my questionnaire. Finally, I am grateful to my whole family members who had give me extreme encouragement and support. This has enabled me to devote myself to my studies and to complete it successfully.

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**Developing a Strategic Handbook for the Apprenticeship Management of  
the Fourth-Year Students in Vocational College: A Case Study of  
Nanchang Vocational University**

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**ABSTRACT**

The objectives of this study were 1) to investigate problems and needs including SWOT analysis of apprenticeship management of the fourth-year students in vocational college; 2) to develop a strategic handbook for apprenticeship management of the fourth-year students in vocational college. This study was conducted on a sample of 254 students, 80 teachers and administrators from Nanchang Vocational University and 30 managers from companies. The research instruments used in this study were questionnaires and a set of questions for the focus group discussion. The questionnaires were collected online from questionnaire star. The data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean, and standard deviation. The results of the study showed that most respondents agree that there were problems of apprenticeship management in vocational college, and they agreed that apprenticeship management was important in developing vocational literacy, and impacted on students' career development. The strategic handbook composed of nine units. All of the nine units were evaluated for accuracy and suitability by three experts (two professors from Chinese vocational undergraduate institutions and one corporate executive), with the level of agreement represented by IOC values, ranging from 0.67 and 1.00. It indicated that the developed "Strategic Handbook for the Apprenticeship Management of the Fourth-Year Students in Vocational College" is acceptable and could be employed to enhance the quality of education for the vocational college.

**Keywords:** strategic handbook; apprenticeship management; vocational education; Nanchang Vocational University

## **1. Introduction**

Research in recent years has found that it can promote national economic development, cultivate skilled personnel, and promote social development, etc. However, it also presents some problems, such as a single cultivation goal, insufficiently reasonable professional settings, unclear positioning of vocational colleges and universities, and the content of teaching in schools is detached from the actual requirements of enterprises. Modern apprenticeship system, as a combination of apprenticeship training and vocational education, can better meet the needs of the connotative development of vocational education. Fox (1995), in his book *The Fallacy of Vocational Schools in Development Planning*, suggests that vocational training should be conducted mainly outside of formal educational institutions, and that enterprise-based training is more efficient than vocational school-based training. Lu (2011) of China's Ministry of Education first talked about modern apprenticeship at the conference, hoping that local governments and enterprises would solve the problem of "labor shortage" on the southeast coast by carrying out modern apprenticeship, which was the first time that modern apprenticeship was proposed in China's education sector. Countries such as Holland, France and Spain reformed their apprenticeship systems in the late 1980s, clearly stipulating the laws and regulations involved in the development of apprenticeships, while countries such as the United Kingdom and Australia also improved their traditional apprenticeship systems and developed modern apprenticeships with their own characteristics. Modern apprenticeship system, as an important way to cultivate skilled personnel, has the successful experience of many countries, and at this time it is very necessary to introduce it into China for the reform of vocational education, and to conduct a detailed and in-depth study of modern apprenticeship system.

## **2. Research Objectives**

(1) To investigate problems and needs including SWOT analysis of apprenticeships of the fourth-year students in vocational college

(2) To develop a strategic handbook for apprenticeship management of the fourth-year students in vocational college.

## **3. Literature Review**

### **3.1 Theory, Concept and Related Research**

Vocational education is an important part of China's education system, compared with traditional education, the teaching content of vocational education mainly involves industry vocational skills and vocational knowledge, vocational education pays more attention to the cultivation of students' working ability and hands-on ability, vocational education has delivered a large number of applied talents to our country, and promoted the development of all walks of life. The concept of apprenticeship has a history of more than 1,000 years in China. In ancient times, apprentices not only referred to people with a skill, but also referred to readers in general. In the standardized dictionary of modern Chinese, the noun form of apprentice is explained as "a young man who learns a trade in a factory, workshop or shop". Apprenticeship is primarily a system in which the master instructs the

apprentice in traditional skills, and the master is not only the transmitter of skills but also the educator of the apprentice's moral character. Apprenticeship, as defined by the Collins Dictionary, is a system whereby a person with an apprenticeship works for a fixed period of time for a person with a specific skill in order to learn that skill. Eurostat has developed six criteria for the concept of apprenticeship, firstly categorizing apprenticeships as part of formal education, where the apprentice obtains a qualification (qualification to practice) at the end of the apprenticeship, where the apprentice enters into a contract with the employer or a formal agreement between the apprenticeship and the educational institution, where the apprentice receives a wage or remuneration, and where the duration of the contract ranges from a minimum of six months to a maximum of six years, and where, prior to the start of the apprenticeship, there is no other formal relationship between the employer and the apprentice to which the contract or formal agreement There are no other formal arrangements between the employer and the apprentice covered by the apprenticeship contract or formal agreement. The European Commission defines apprenticeships more broadly, with the Commission describing apprenticeships as "a form of vocational education which combines schooling (or training centers) with training in an enterprise and confers a uniform vocational qualification on those who qualify. Modern apprenticeship program at present, there is no uniform definition of the concept of "Modern Apprenticeship", but one thing is certain: Modern Apprenticeship is "rooted" in the soil of the apprenticeship system (traditional apprenticeship), and Modern Apprenticeship is not a complete "abandonment" of the traditional apprenticeship system, but an inheritance and development of the traditional apprenticeship system. China's vocational education also has the mode of school-enterprise co-operation, but the main body of education is still dominated by the school, while in the modern apprenticeship system, the school and the enterprise have the same important status.

### 3.2 Research Framework

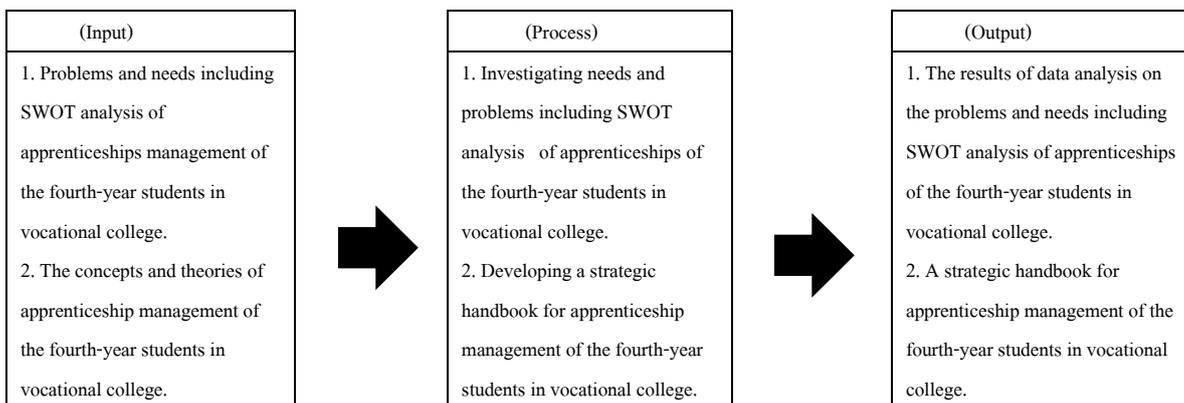


Figure: Research Framework

## **4. Research Methodology**

### **4.1 Research Design**

This study was mixed methods, and combined both quantitative research and qualitative research.

### **4.2 Population and Sample groups**

#### **Population**

This study was conducted at Nanchang Vocational University in Nanchang City, Jiangxi Province, China. The research population for this research project was divided into 3 groups; namely 1) 700 students in the year 2023, 2) 100 teachers and administrators, and 3) 33 managers from companies.

#### **Sample groups**

The sample in this study was divided in to 3 groups; namely, 1) 254 students 2) 80 teachers and administrators 3) 30 managers from companies. The number of respondents in sample groups derived from Yamane formula (1973), and were obtained through the stratified random sampling technique. Moreover, the three specialists were invited for focus group discussion meeting.

### **4.3 Research Instruments**

1. Questionnaires: In this research project, there were 3 sets of questionnaires: students set, teachers and administrators set, and managers from companies set. The questionnaire for students was divided into 3 parts; namely, 1) general information, 2) problems of the fourth-year students in vocational college 3) needs of the fourth-year students in vocational college. The questionnaire set for teachers and administrators was divided into 3 parts; namely, 1) general information 2) opinion of teachers and administrators towards the problems of the apprenticeship management in vocational college. 3) needs of teachers and administrators for the apprenticeship management in vocational college. The questionnaire set for the managers from companies was divided into 3 parts; namely, 1) general information 2) the opinion of teachers and administrators towards the problems of the apprenticeship management in vocational college 3) needs of teachers and administrators for the apprenticeship management in vocational college. The questionnaire was evaluated for the index of item-objective congruence scores (IOC scores) by the three specialists. The reliability of the questionnaires was measured by using the technique of Cronbach's alpha coefficient. (Students: 0.965, teachers and administrators: 0.938, and managers from companies: 0.980)

2. A set of questions for the focus group discussion: three experts (two experts in vocational education and one executive of a well-known company) evaluated the apprenticeship handbook, and were invited to participate in the focus group discussion sessions to share their views and comments on the correctness and applicability of the handbook, and then the results were presented in the form of an IOC (Index of Item-objectives congruence).

### **4.4 Data Collection**

1. The researchers themselves collected the data and information online via questionnaire star (<https://www.wjx.cn>). The researchers submitted a prior permission letter to the school director for requesting permission to collect data and information from the sample groups at the Nanchang Vocational University.

2. For the SWOT analysis, two professors from vocational undergraduate colleges and a business administrator were invited to share their strengths, weaknesses, opportunities, and threats in terms for the apprenticeship management of the fourth-year students in vocational college: a Case Study of Nanchang Vocational University.

#### 4.5 Data Analysis

1) The Data and information collected were analyzed, interpreted and then presented in terms of frequency count, percentage, mean ( $\bar{x}$ ), and standard deviation (S.D.). The five-point liker rating scale was used to evaluate the respondents' needs and problems of apprenticeship management of the fourth-year students in vocational College.

The criteria and define at the range of the mean scores as the following:

Rating reference table:

weight/Scale	Mean Range	Interpretation
5	4.51-5.00	Absolutely agree
4	3.51-4.50	Agree
3	2.51-3.50	Slightly agree
2	1.51-2.50	not agree
1	1.00-1.50	Absolutely Disagree

2) The ideas and comments of the 3 specialists obtained from the focus group discussion meeting, were analyzed and then used to correct and improve the contents of the handbook.

## 5. Research Findings

### 5.1 Problems of apprenticeships management of the fourth-year students in vocational college

Table 1: Opinions of students towards the problems of the apprenticeship management in vocational college.

Items	n=254		Level of problems
	$\bar{x}$	S.D.	
1. Apprenticeships don't support your own career plans.	4.54	1.05	Absolutely agree
2. Student apprenticeship programmers do little to boost your career self-confidence.	4.37	1.01	Agree
3. Apprenticeship programmers have little impact on your career plans.	4.31	1.06	Agree
4. Your skills and knowledge development in the workplace cannot be used as a guide.	3.48	0.96	Slightly agree
5. Reduced opportunities to participate in company projects and missions.	3.42	0.92	Slightly agree

As can be seen from the table1, most of students agree that there are problems of the apprenticeship management in vocational college. Among them, apprenticeships do not support their career plans have the highest score ( $\bar{x}$ =4.54, S.D. = 1.05), indicating that students are particularly concerned that the apprenticeship program lacked support for their personal career plans. Confidence in career self-development also appeared to be affected by the program. They also concern about the impact of the apprenticeship program on their overall career plans.

Table 2: Opinions of teachers and administrators towards the problems of the apprenticeship management in vocational college

Items	n=80		Level of problems
	$\bar{X}$	S.D.	
1. Inadequate resources for mentoring and training for student apprenticeship programmers.	4.70	0.66	Absolutely agree
2. The student apprenticeship programs have not significantly increased student motivation and initiative.	4.71	0.66	Absolutely agree
3. There is a lack of clarity about roles and responsibilities in the apprenticeship programs.	4.76	0.70	Absolutely agree
4. Student apprenticeship programs have less positive impact on students' career development.	3.48	0.69	Slightly agree
5. It has poor communication and cooperation between apprentices and mentors	3.66	0.75	agree

As can be seen from the table 2, most of teachers and administrators agree that there are problems of the apprenticeship management in vocational college. Among these issues, teachers and administrators absolutely agree that there are lack of clarity about roles and responsibilities in the apprenticeship programs ( $\bar{X}$ =4.76, S.D. = 0.70); the student apprenticeship programs have not significantly increased students' motivation and initiative ( $\bar{X}$ =4.71, S.D. = 0.66); and there are inadequate resources for mentoring and training of student apprenticeship programs ( $\bar{X}$ =4.70, S.D.= 0.66). Some teachers and administrators agree that it has poor communication and cooperation between apprentices and mentors ( $\bar{X}$ =3.66, S.D.= 0.75), and some of them slightly agree that student apprenticeship programs have less positive impact on students' career development ( $\bar{X}$ =3.48, S.D.= 0.69).

Table 3: The opinions of managers towards the problems of the apprenticeship management in vocational college

Items	n=30		Level of problems
	$\bar{X}$	S.D.	
1. Student apprenticeship programs add little real value to the business.	4.27	1.34	Agree
2. Trainees in student apprenticeship programs have had little success in bringing new talent resources into the business.	4.30	1.21	Agree
3. Mismatch between apprentices and actual needs of enterprises.	4.27	1.26	Agree
4. The training content of students' apprenticeship programs rarely meets the needs of businesses.	3.20	0.89	Slightly agree
5. Mismatch between the actual job skills of the apprentice and the requirements of the job.	3.03	0.89	Slightly agree

From table 3, managers from the companies agree that there are problems of the apprenticeship management in vocational college. They agree that student apprenticeship programs add little real value to business ( $\bar{X}=4.27$ , S.D.= 1.34). This suggests that managers are concerned about the added value that student apprenticeship programs bring to their businesses and their effectiveness in bringing in new sources of talent. They agree that it has the mismatch between apprentices and actual needs of enterprises ( $\bar{X}=4.27$ , S.D. =1.26). Then, alignment between apprenticeship programs and actual business needs is a major issue. In addition, addressing bottlenecks in manpower training remains an area of focus. However, relatively little attention is paid by managers to the alignment of training content with business needs and the mismatch between apprenticeship skills and job requirements.

### 5.2 Needs of the fourth-year students for apprenticeship management in vocational college.

Table 4: Needs of students for the apprenticeship management in vocational college.

Need	n=254		Level of needs
	$\bar{X}$	S.D.	
1. Student apprenticeship programs play an important role in developing vocational literacy.	4.57	0.98	Absolutely agree
2. Apprenticeships provide vital support for students' the career planning.	4.57	1.01	Absolutely agree
3. Apprenticeship programs can have a significant impact on your career plans.	4.56	1.00	Absolutely agree
4. The Student Apprenticeship Scheme provides a wide range of practical opportunities.	3.43	0.89	Slightly agree
5. The Student Apprenticeship programs is rich and practical in practice.	3.50	0.88	Slightly agree

From table 4, it can be seen that the fourth-year students agree that they need apprenticeship programs. Among the needs, student apprenticeship programs plays an important role in developing students' vocational literacy. ( $\bar{X}$ =4.57, S.D. =0.98). This suggests that students' needs for apprenticeship programs revolve around personal career development support and increased career self-confidence. They would like the apprenticeship programs to provide important guidance for their career planning and to facilitate their career growth through practical opportunities and rich training content. On the other hand, students expressed a desire for richer and more practical content in apprenticeship programs to enhance the integration of theoretical learning with practical application ( $\bar{X}$ =3.50, S.D. =0.88).

Table 5: Needs of Teachers and administrators for the apprenticeship management in vocational college

Items	n=80		Level of needs
	$\bar{X}$	S.D.	
1. Strong clarity of roles and responsibilities in the apprenticeship programs.	4.73	0.60	Absolutely agree
2. The positive impact of student apprenticeship programmers on students' career development is significant.	4.71	0.60	Absolutely agree
3. Apprenticeship skills development closely aligned with practical application.	4.68	0.73	Absolutely agree
4. Apprenticeships are highly matched to the actual needs of businesses.	3.54	0.80	Agree
5. High level of apprentice satisfaction with the integration of skills development with practical application.	4.61	0.74	Absolutely agree

As can be seen in table 5, teachers and administrators absolutely agree that the apprenticeship management is needed in vocational college. In these items, roles and responsibilities in the apprenticeship programs must be clear ( $\bar{X}$ =4.73, S.D. =0.60). This suggests that the highest scoring items for teachers and administrators highlight teachers' emphasis on clear role definition, the significant impact of apprenticeships on careers, consistent skills development, apprentices' sense of responsibility, and high levels of satisfaction with career development planning. These aspects reflect the effectiveness and positive outcomes of the apprenticeship programs. On the other hand, the relatively low scores on the match of apprenticeships and actual needs of businesses ( $\bar{X}$ =3.54, S.D. =0.80) suggest that while there is agreement, there may be some room for improvement in aligning apprenticeships with the needs of the business and maximizing satisfaction in the integration of skills development.

Table 6: Needs of managers for the apprenticeship management in vocational college

need	n=30		Level of needs
	$\bar{X}$	S.D.	
1. The real value that student apprenticeship programs bring to a business.	4.37	1.25	Agree
2. Aligning student apprenticeship programs with the real needs of enterprises.	4.33	1.16	Agree
3. Participants in the Student Apprenticeship Programmed have far-reaching implications as they bring a new source of talent to the business.	4.23	1.28	Agree
4. Close integration of apprentices with employees of the enterprise.	3.20	0.96	Slightly agree
5. Improvement of the level of monitoring and evaluation of the apprenticeship training process by enterprises.	3.33	0.99	Slightly agree

From table 6, it shows the managers' opinions on the needs of apprenticeship management in vocational college. Most managers agree on the actual value that student apprenticeship programs bring to a business ( $\bar{X}$ =4.37, S.D. =1.25). This suggests that managers emphasize the real value of apprenticeship programs, their alignment with business needs, and the ability of these programs to address manpower training bottlenecks. In addition, the introduction of new talent through apprenticeships and their alignment with actual needs received high attention. However, relatively little has been done to integrate apprentices with employees ( $\bar{X}$ =3.20, S.D. =0.96), and to strengthen the monitoring and evaluation of the apprenticeship training process ( $\bar{X}$ =3.33, S.D. =0.99).

### 5.3 The results of SWOT analysis Report: "The Apprenticeship Management Handbook for Fourth-Year College Students in Vocational Institutes"

Background: After an in-depth discussion workshop, the researchers conducted a comprehensive exploration of constructing the "Management Handbook for Senior College Students' Apprenticeship in Vocational Institutes" at Nanchang Vocational University. The workshop involved two vocational education experts and a corporate executive, each from different fields, contributing diverse experiences and insights.

The workshop yielded the following key conclusions:

1. Importance of Interdisciplinary Collaboration: Interdisciplinary collaboration holds significant importance in apprenticeship management, fostering comprehensive student development while catering to industry needs.
2. Personalized Guidance: Offering personalized student guidance enhances the efficacy of apprenticeship, boosting students' vocational confidence and career planning skills.
3. Opportunities in Industry Collaboration: Collaborations between educational institutions and industries are pivotal to successful apprenticeships, potentially creating more practical opportunities and industry connections.

4. Enhanced Mentor Training: Improving mentor training can elevate the quality of apprenticeships, ensuring students receive effective guidance and support.

SWOT Analysis Evaluation:

Strengths:

Expert Insights: The involvement of expert professors and a corporate executive provides rich experience and insights, offering strong support for the construction of the apprenticeship management handbook.

Interdisciplinary Collaboration: Insights from different fields allow for a holistic consideration of various factors, ensuring the handbook's comprehensiveness and practicality.

Weaknesses:

Limited Workshop Participants: The workshop's limited number of participants might not encompass all potential issues and perspectives.

Possible Bias: Workshop conclusions could be influenced by participants' individual viewpoints and experiences, potentially leading to certain limitations.

Opportunities:

Applicability Extension: Workshop outcomes can serve as the foundation for the apprenticeship management handbook's construction, with potential to expand these strategies to similar educational institutions in the future.

Continuous Improvement: Based on expert opinions and workshop findings, ongoing improvements can be made to ensure the apprenticeship management handbook remains up-to-date.

Threats:

External Changes: Rapid shifts in educational and professional landscapes could impact the feasibility and effectiveness of apprenticeships.

Resource Constraints: Implementing the apprenticeship management handbook might face limitations in terms of time, human resources, and funding.

Through the workshop and SWOT analysis, the researchers gain a deeper understanding of the potential, challenges, and adaptability of the apprenticeship management handbook. These findings will guide the formulation and implementation of the handbook, maximizing benefits for students and enterprises alike.

#### **5.4 Develop a strategic handbook for managing apprenticeships for fourth-year students in vocational college**

The strategic handbook consists of nine units, which are 1) Overview and significance of apprenticeship 2) Challenges and issues facing apprenticeship 3) Enhancing the apprenticeship experience 4) Industry adaptation and interface 5) Effective mentoring and communication 6) Skills integration and practical application 7) Impacts of apprenticeship on enterprises 8) Meeting student and enterprise needs 9) Conclusion and future outlook. Meeting student and enterprise needs 9) Conclusion and future outlook. All nine units were assessed by three experts for accuracy and applicability, expressed as IOC (Index of Item-Objective Congruence) values. The IOC values for all nine units ranged from 0.67 to 1.00, indicating that the Developed Strategic Handbook for Managing

Apprenticeships for Fourth- Year Students in Vocational Institutions is acceptable and can be used as a handbook for apprenticeship training for fourth year students in vocational institutions aiming to improve the quality of apprenticeship training.

## 6. Discussion

1. This study delves into the demands and challenges of managing the apprenticeship program for fourth-year students at Nanchang Vocational University. Insights obtained from the perspectives of students, teachers, and business managers reveal several key aspects warranting in-depth discussion and consideration.

**Integration of Vocational Education into the Academic Realm:** Nanchang Vocational University's prominent position in China's vocational undergraduate education underscores the broader issue of integrating vocational education into traditional academic frameworks. This finding has triggered discussions about acknowledging and integrating vocational training as a valuable educational avenue and its broader impact on addressing labor force skill gaps.

**Student-Centric Apprenticeship Programs:** Students' viewpoints highlight the necessity of student-centric apprenticeship programs. Despite observing high engagement levels, deficiencies in career planning support and limited vocational confidence underscore the need to blend apprenticeship programs with individual career aspirations. This underscores the importance of personalized guidance and mentor training to help students bridge the gap between theoretical knowledge and practical application. This coincides with the theories on apprenticeship and the inheritance and innovation of trades as elaborated by Pu and Xu (2018) in their paper "Research on the interaction between industrial forms and modern apprenticeship in China: an empirical analysis based on the speeches of business experts".

**Challenges Faced by Educators and Managers:** Challenges emphasized by educators and managers reveal the complexities of roles, responsibilities, and alignment with industry needs within apprenticeship programs. These issues call for comprehensive reform in mentor training, resource allocation, and role clarification. This coincides with Yang and others (2019), who explained in their paper, "A Study of Teacher-Apprentice Relationships in Modern Apprenticeship - Based on Students' Perspectives," that constructing good teacher-apprentice relationships has become a top priority in vocational education efforts. This discussion prompts reflection on how to enhance collaboration between educators and industry professionals to ensure the relevance and effectiveness of apprenticeship programs.

**Industry Alignment and Talent Recruitment:** Concerns raised by business managers regarding the actual value of apprenticeship programs and their alignment with business needs highlight the need for establishing close connections between education and industry. This coincides with the theories on apprenticeship and the inheritance and innovation of trades as elaborated by Pu and Xu (2018) in their paper "Research on the interaction between industrial forms and modern apprenticeship in China: an empirical analysis based on the speeches of business experts". This discussion has prompted reflections on how to better construct bridges

between academic institutions and businesses, fostering dynamic partnerships that cater to both immediate skill needs and long-term economic growth.

**Demands and Collaboration among Diverse Stakeholders:** the convergence of demands among students, teachers, and business managers underscores the importance of collaboration among these stakeholders. A comprehensive discussion can center on how to create an ecosystem that maintains alignment between educational goals, student aspirations, and industry demands. This collaborative approach can lead to the development of more comprehensive and effective apprenticeship programs. This coincides with what Yu and others (2018) stated in their paper "Status and Prospect of Modern Apprenticeship in China's Vocational Education": the modern apprenticeship system effectively solves the aspect of industrial labor shortage to give suggestions.

**Future Research and Ongoing Improvement:** The Conclusion and Outlook section underscores the necessity of future research to further explore the effectiveness of apprenticeship program management. This discussion opens the door to exploring methods, indicators, and best practices for evaluating the impact of apprenticeship programs on student career development and business growth. It also encourages discussions on strategies for the continuous improvement of apprenticeship programs to adapt to evolving industry environments and educational paradigms. This coincides with what Luo (2022) elaborated in his paper "Research on Talent Cultivation of Higher Vocational Modern Apprenticeship Based on School-Enterprise Union - Matching the Demand for Skilled Talents in Made in China 2025": there are some problems in the cultivation of apprenticeship talents by students.

In summary, this study has discussed these themes, such as the integration of vocational education, student-centric approaches, collaboration among stakeholders, and alignment of education with industry needs. These themes warrant thoughtful contemplation and action to shape the future of apprenticeship programs, benefiting students, educators, businesses, and the broader economy.

2. The "Management Handbook for Senior College Students' Apprenticeship in Vocational Institutes" takes the implementation of senior college students' apprenticeship at Nanchang Vocational University as a case study. It combines the guidance from the Ministry of Education of the People's Republic of China to provide effective guidance for schools, teachers, students, and enterprises in the management of apprenticeship programs. The handbook begins by delving into the background and objectives of apprenticeship, comprehensively exploring the concept, challenges, optimization methods of apprenticeship, and how to closely align it with the demands of enterprises.

The strategic handbook is structured into nine units, each comprising at least three subsections, ensuring comprehensive coverage. Initially, the handbook introduces the background and significance of modern apprenticeship, interpreting the Ministry of Education's guidance on apprenticeship, thereby laying the foundation for the entire study. Subsequently, challenges and existing problems of apprenticeship are analyzed from the perspectives of students, teachers, and administrators, forming a multidimensional awareness of issues. Following that, methods to enhance the apprenticeship experience are discussed, including integrating apprenticeship with

individual career planning, boosting students' career self-confidence, and inspiring students' expectations and attitudes.

The strategic handbook underscores the alignment between apprenticeship and industries, narrowing the skills gap, and clarifying roles and responsibilities. In terms of guidance and communication, the strategic handbook emphasizes the provision of enhanced resources, training, and the promotion of effective interaction between students and guiding instructors. By amalgamating skills with practical application, apprenticeship aids students in developing practical skills and cultivating a sense of responsibility and autonomy. Moreover, the strategic handbook delves into the impact of apprenticeship on enterprises, quantifying its value and contribution, ensuring a congruence between apprenticeship and the needs of enterprises.

## **7. Recommendations for further study**

- (1) Study on the effectiveness of a handbook for the apprenticeship management of the fourth-year student in vocational college
- (2) Factors influencing the capability of vocational college student on apprenticeship management

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**A construction of a handbook by using a cooperation system between  
university and company for making students more talent :  
A case study of Wuhan university of engineering science, China**

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**ABSTRACT**

The objectives of this research were: 1) To investigate needs of the Cooperation between University and Private Companies for the Enhancement of the Quality of Education , 2) to develop Guidelines for the Cooperation between University and Private Companies for the Enhancement of the Quality of Education. For the investigation of needs the Cooperation between University and Private Companies for the Enhancement of the Quality of Education. In this study, Wuhan University of Engineering Science, China was used as a case study. This study surveyed 385 students and 41 enterprises at Wuhan University of Engineering and Technology. The focus group discussion also used these three special programs. The research tool used in this study is a questionnaire survey and a set of questions from a focus group discussion. Analyze the collected information and data through content analysis methods, and present them in the form of frequency counts, mean values, and standard deviations. The Likert rating scale is used to rate the degree or level of problems and needs. The research results indicate that: (1) The problems and needs of students and cooperative units at Wuhan University of Engineering and Technology are at the "highest" level. 2) This talent cultivation strategy manual consists of five units and is applicable to universities that adopt a school enterprise cooperation system. All five units have been evaluated by three experts, with an IOC value of 0.66 to 1.0. This means that the talent cultivation strategy manual constructed through school enterprise cooperation is acceptable and can serve as an important reference material for improving the quality of talent cultivation in education and teaching at Wuhan University of Engineering and Technology.

**Keywords:** school enterprise cooperation, system construction, talent training manual, talent quality.

## 1. Background

Since the beginning of the 21st century, with the adjustment of the national economic structure, the rapid development of the national economy requires a large number of applied talents. Carrying out school enterprise cooperation and establishing a talent cultivation system with full participation of enterprises will cultivate various skills talents urgently needed by society and enterprises on a larger scale and at a higher level. This is a major and urgent political task that enterprises and universities must face at present.

The development of school enterprise cooperation in China and its existing problems include weak innovation ability, weak practical ability, disconnection between theory and practice, and weak practical ability of students. The disconnect between higher education teaching and practice in China has led to a weak theoretical foundation and limited practical experience for many college students in innovation and entrepreneurship. Many college students still lack timely extension of extracurricular knowledge and skills, lack understanding of the employment environment, market competition, and industry development status, lack understanding of the talents needed in the industry, lack timely understanding of the current cutting-edge and relevant laws and regulations in the industry, and lack relevant understanding of innovation and entrepreneurship.

General Secretary Xi Jinping (2022) emphasized in the report of the 20th National Congress of the Communist Party of China to implement the strategy of rejuvenating the country through science and education, strengthen the support of talents in modernization construction, and highlight "coordinating vocational education, higher education, and continuing education. Collaborative innovation, promoting Vocational integration, integration of production and education (University-enterprise cooperation), integration of science and education, and optimization of the positioning of vocational education."

Universities are an important battlefield for cultivating applied talents in China. However, due to the lack of practical training equipment and communication with enterprises, some graduates trained by these universities often face unemployment upon graduation because they cannot meet the needs of modern enterprises. Cultivating talents suitable for the needs of enterprises requires cooperation between universities and enterprises, understanding the requirements of modern enterprises for talents, and adopting an organic combination of classroom teaching and practical training to cultivate talents suitable for different employers. School enterprise cooperation in running schools is an important reform direction for China's higher education to face society, serve society, and promote social development. This is also an inevitable trend in the development of higher education in China.

## 2. Objectives

- 1) To investigate needs of the company.
- 2) To investigate problems of students who can't find the job.
- 3) To construct a handbook by using a system to make more talent.

### **3. Review of Literature**

#### **3.1 Concepts/Theories/Related Research**

School enterprise cooperation refers to various cooperative activities between educational institutions and industries in fields such as talent cultivation, scientific research, and technical services. It is a variety of collaborative activities between educational institutions and industries in the fields of talent cultivation, scientific research, technology development, and social services. Its purpose is to promote the good development of universities and industries by complementing resources and utilizing the advantages and potential of the two major participants.

The school enterprise cooperative education model originated in Germany at the end of the 19th century, and the term "school enterprise cooperative education" first appeared in the United States in the early 20th century. The names of school enterprise cooperation vary from country to country, such as cooperative education in the United States, dual education in Germany, sandwich system in the UK, and industry university cooperation in Japan. Although titles vary, fundamentally, the fundamental reason for countries to engage in school enterprise cooperation lies in adapting to the rapid development of the economy and society, as well as the demand for emerging professional and skilled talents. Since the development of China's school enterprise cooperation system, the scope and content of cooperation have continuously expanded, playing an important role in promoting the development of vocational education. However, there are still many imperfections and imperfections. Studying the emergence and development process of China's school enterprise cooperation system, summarizing experiences and lessons, can help improve China's vocational education school enterprise cooperation system and build a modern vocational education system with Chinese characteristics.

After the reform and opening up, China's vocational education school enterprise cooperation system has entered a new stage of healthy development. The country has introduced a series of policies and regulations to support cooperation between vocational colleges and enterprises, accelerating the institutionalization process of school enterprise cooperation.

Zhang Hongtian (2008) has conducted a research project on the exploration and practice of an applied talent training system. The research results include: in order to better adapt the talent cultivation of newly established applied undergraduate colleges to the needs of social development, adapt the talent cultivation mode to the existing foundation and conditions, and achieve the scientific, operational, and innovative nature of applied talents.

### 3.2 Conceptual Framework

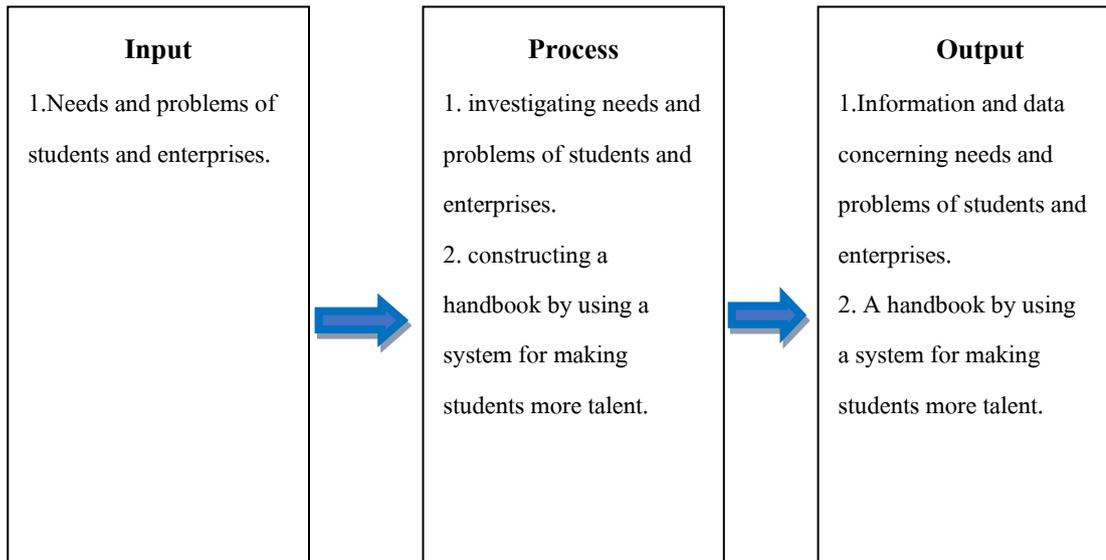


Figure 1 Conceptual Framework

## 4. Research methodology

### 4.1 Population/Sample Groups

This study takes Wuhan University of Engineering and Technology as a case study, and the population in this research project will be divided into two groups, namely:

- 1) 41 enterprises that have cooperated with universities;
- 2) Research University: 10,000 college students from Wuhan Institute of Engineering Science and Technology.

#### Sample groups

The sample group in this study will be divided into two groups, namely: 1) 385 college students from Wuhan University of Engineering and Technology; 2) 41 companies that have collaborated with universities. The sample group will be derived from the Yamane Taro formula (Yamane, 1973). The respondents were collected through simple random sampling techniques.

### 4.2 Research Instrument

#### 4.2.1 Questionnaire

In this research project, a questionnaire survey method was used for data collection. The questionnaire is divided into two groups; namely, 1) Enterprise Collection and 2) Student Collection. The questionnaire is divided into two parts: 1) general information, and 2) problems and needs in the process of talent cultivation in universities.

In order to better understand the current situation of talent cultivation in higher education institutions, researchers studied from Huang Yani (2004) Exploring Higher Education, (4), 70-72. A research project called International Comparison of School Enterprise Cooperation Models in Higher Vocational

Education was conducted, and appropriate questions were selected from the questionnaire to develop a questionnaire to improve the quality of talent cultivation in universities.

For this part the questionnaire was evaluated for the Index of Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire evaluated with the range of IOC 0.66 to 1.00 was employed meeting for this research.

#### 4.2.2 A focus group for this discussion meeting.

Three experts evaluated the construction manual and invited them to participate in three focus group discussions. The results were presented in the form of IOC (Consistency Index).

#### 4.3 Data Collection

For this research project, the researcher herself collected the data and information from the sample groups. The sample groups were informed the purposes of the data collection, made an appointment. The researcher submitted a letter of permission to the school director in advance to ask a permission to collect the data and information from the samples group at Wuhan University of Engineering and Technology.

#### 4.4 Data Analysis

Analyze and interpret the collected data and information, and then present them in terms of frequency field, percentage, mean, standard deviation (S.D.), etc. Use the Likert five point scales to assess the needs and questions of respondents towards businesses and students.

### 5. Research Results

Based on the opinions of investigating the employment needs of universities and enterprises for students, this paper explores the needs of talent cultivation guidelines in universities and constructs strategic guidelines for talent cultivation in universities.

#### 5.1 Problems/Needs

Table 1: Student survey questionnaire (学生的问题)

Questions	n=385		Level of problems
	$\bar{x}$	S.D.	
<b>Problems</b>			
1. You are not satisfied with the major you studied in university.	4.55	0.2	Highest
2. You are not satisfied with the school curriculum arrangement.	4.50	0.2	High
3. You are not satisfied with the effectiveness of talent cultivation jointly conducted by schools and enterprises.	4.50	0.2	High
4. You are not satisfied with the communication and cooperation work between schools and enterprises.	4.53	0.21	Highest

Questions	n=385		Level of problems
	$\bar{X}$	S.D.	
5. May I ask if you are not very confident in future employment.	4.55	0.21	Highest
6. You are not satisfied with the practical activities organized by schools and enterprises.	4.54	0.20	Highest
7. You are not satisfied with interactive activities such as training competitions organized by schools and enterprises.	4.58	0.20	Highest
8. You are not satisfied with the internship unit arranged by the school.	4.55	0.21	Highest
9. Are you dissatisfied with the improvement in employability obtained during your time at school.	4.57	0.20	Highest
10. You proposed rationalization suggestions, but the school is not satisfied with the handling and attitude of the rationalization suggestions.	4.54	0.21	Highest
11. You are not satisfied with the timeliness and amount of recruitment information released by the school.	4.57	0.19	Highest
12. Are you dissatisfied with the school's employment services.	4.56	0.21	Highest
13. Are you dissatisfied with the job fair organized by the school.	4.56	0.20	Highest
14. Are you dissatisfied with the school's promotion of employment policies for college students.	4.56	0.21	Highest
15. You are not satisfied with the actual evaluation results of the school.	4.55	0.21	Highest
16. Do you have confidence in your current employment situation.	4.54	0.21	Highest
17. You are not satisfied with the teaching management of this internship unit.	4.56	0.20	Highest
18. Are you dissatisfied with the employment skills training courses offered by the school.	4.56	0.21	Highest
19. How much do you think interns are valued.	4.55	0.20	Highest
20. You are not satisfied with the guidance and assistance provided by the responsible teachers in the internship unit.	4.56	0.20	Highest
<b>Average</b>	<b>4.55</b>	<b>0.20</b>	<b>Highest</b>

According to Table 1, students scored the highest on issues related to school enterprise cooperation and employment. Firstly, the majority of students stated that the joint training and organization of various activities by schools and enterprises have the greatest impact on the improvement of students' technical and skill practical abilities, with an overall average score of ( $\bar{X}$  = 4.55) (S.D.=0.20).

**Table 2: Survey questionnaire for enterprises (企业的调查问卷)**

Questions	n=385		Level of problems
	$\bar{X}$	S.D.	
<b>Needs</b>			
1. Adjustments need to be made to the majors studied in university	4.57	0.24	Highest
2. Need to arrange school courses	4.57	0.24	Highest
3. The effectiveness of talent cultivation jointly conducted by schools and enterprises needs to be improved	4.56	0.23	Highest
4. You need to strengthen communication and cooperation between schools and enterprises	4.59	0.25	Highest
5. May I ask if your confidence in future employment needs to be strengthened	4.58	0.24	Highest
6. You need to strengthen the practical activities organized by schools and enterprises	4.57	0.24	Highest
7. You need to align with the internship unit arranged by the school.	4.58	0.25	Highest
8. Your need to improve your employability during your school years.	4.57	0.24	Highest
9. Provide rationalization suggestions, and the school needs to handle and attitude towards rationalization suggestions in a timely manner.	4.57	0.25	Highest
10. You need to enhance the timeliness and amount of recruitment information published by the school.	4.56	0.22	Highest
11. You need to have a comprehensive understanding of the school's employment services.	4.58	0.25	Highest
12. Your understanding of the recruitment fair organized by the school needs to be effective.	4.56	0.25	Highest

Questions	n=385		Level of problems
	$\bar{X}$	S.D.	
13. Do you need to promote the school's policies on employment forms for college students.	4.58	0.24	Highest
14. Your actual evaluation results of the school need to be enhanced.	4.58	0.24	Highest
15. Your confidence in the current employment situation needs to be enhanced.	4.55	0.25	Highest
16. Your teaching management ability in this internship unit needs to be improved.	4.57	0.24	Highest
17. You need to improve the effectiveness of the employment skills training provided by the school.	4.57	0.24	Highest
18. Do you think the importance attached to interns needs to be increased.	4.57	0.24	Highest
19. The teacher in charge of the internship unit needs to improve their guidance and assistance during the internship.	4.56	0.23	Highest
20. Parents and family members of students need to improve their satisfaction with the current employment situation.	4.56	0.23	Highest
<b>Average</b>	<b>4.57</b>	<b>0.24</b>	<b>Highest</b>

According to Table 2, you scored the highest on the issue of strengthening communication and cooperation between schools and enterprises. Firstly, most business owners stated that only by strengthening communication and cooperation between schools and enterprises can students meet the needs of society and enterprises be cultivated, with an overall average score off ( $\bar{X}$  4.57) (S.D.=0.24).

Table 3: Survey of student satisfaction (学生满意度调查)

Questions	n=385		Level of problems
	$\bar{x}$	S.D.	
<b>Satisfaction</b>			
1.You are not satisfied with the major you studied in university.	4.57	0.21	Highest
2.You are not satisfied with the school curriculum arrangement.	4.56	0.21	Highest
3.You are not satisfied with the effectiveness of talent cultivation jointly conducted by schools and enterprises.	4.66	0.21	Highest
4.You are not satisfied with the communication and cooperation work between schools and enterprises.	4.59	0.24	Highest
5.May I ask if you are not very confident in future employment.	4.68	0.24	Highest
6.You are not satisfied with the practical activities organized by schools and enterprises.	4.66	0.24	Highest
7. You are not satisfied with interactive activities such as training competitions organized by schools and enterprises.	4.61	0.20	Highest
8.You are not satisfied with the internship unit arranged by the school.	4.63	0.20	Highest
9.Are you dissatisfied with the improvement in employability obtained during your time at school.	4.66	0.20	Highest
10.You proposed rationalization suggestions, but the school is not satisfied with the handling and attitude of the rationalization suggestions.	4.59	0.20	Highest
11.You are not satisfied with the timeliness and amount of recruitment information released by the school.	4.66	0.21	Highest
12.Are you dissatisfied with the school's employment services.	4.59	0.23	Highest
13.Are you dissatisfied with the job fair organized by the school.	4.65	0.23	Highest
14.Are you dissatisfied with the school's promotion of employment policies for college students.	4.66	0.21	Highest

Questions	n=385		Level of problems
	$\bar{X}$	S.D.	
15.You are not satisfied with the actual evaluation results of the school.	4.65	0.25	Highest
16.Do you have confidence in your current employment situation.	4.79	0.25	Highest
17. You are not satisfied with the teaching management of this internship unit.	4.65	0.24	Highest
18. Are you dissatisfied with the employment skills training courses offered by the school.	4.66	0.24	Highest
19.How much do you think interns are valued.	4.64	0.25	Highest
20.You are not satisfied with the guidance and assistance provided by the responsible teachers in the internship unit.	4.66	0.20	Highest
<b>Average</b>	<b>4.64</b>	<b>0.22</b>	<b>Highest</b>

According to Table 3, students have the highest scores on issues related to school enterprise cooperation and employment. Firstly, the majority of students stated that the joint training of schools and enterprises has the greatest impact on the improvement of students' technical and skill practical abilities, with an overall average score of ( $\bar{X}$ 4.64 ) (S.D.=0.22).

**Table 4 : Enterprise Satisfaction Survey (企业满意度调查)**

Questions	n=385		Level of problems
	$\bar{X}$	S.D.	
<b>Needs</b>			
1. Not satisfied with students' professional theoretical knowledge	4.57	0.21	Highest
2.Not satisfied with the students' job operation skills	4.56	0.21	Highest
3.Dissatisfied with students' practical problem-solving abilities	4.66	0.21	Highest
4.Dissatisfied with students' loyalty to the company	4.59	0.24	Highest
5.Dissatisfied with students' ability to cooperate and coordinate	4.68	0.24	Highest
6.Dissatisfied with students' ability to manage and restrain themselves	4.66	0.24	Highest

Questions	n=385		Level of problems
	$\bar{X}$	S.D.	
7.Dissatisfied with students' ability to withstand and adjust their psychology	4.61	0.20	Highest
8.Dissatisfied with students' interpersonal communication and teamwork awareness	4.63	0.20	Highest
9.Dissatisfied with students' ability to adapt to the work environment	4.66	0.20	Highest
10.Dissatisfied with the overall quality of graduates	4.59	0.20	Highest
11.Not satisfied with the evaluation of students' professional skills	4.66	0.21	Highest
12.Not satisfied with the school's professional and curriculum settings	4.59	0.23	Highest
13.Dissatisfied with students' actual work abilities	4.65	0.23	Highest
14.Dissatisfied with students' professionalism	4.66	0.21	Highest
15.Dissatisfied with students' practical skills	4.65	0.25	Highest
16.Dissatisfied with students' professional level and abilities	4.79	0.25	Highest
17.Dissatisfied with students' learning abilities	4.65	0.24	Highest
18.Dissatisfied with students' ability to cooperate and coordinate	4.66	0.24	Highest
19.Not satisfied with students' computer skills	4.64	0.25	Highest
20.Not satisfied with students' foreign language proficiency	4.66	0.20	Highest
<b>Average</b>	<b>4.64</b>	<b>0.22</b>	<b>Highest</b>

According to Table 4, companies have the highest dissatisfaction scores for students on issues related to school enterprise cooperation and employment. with an overall average score of ( $\bar{X}=4.64$ ) (S.D.=0.22).

## 5.2 Based on the employment needs of enterprises for students, schools and enterprises collaborate to develop a system for cultivating students' talents to construct a manual.

In order to provide important guidance for the construction of the "Talent Training Manual for Universities Utilizing the School Enterprise Cooperation System" through research conclusions, a talent training manual with five modules has been constructed - purpose significance, domestic and international situation, operating mechanism, system construction, and operational guarantee. Based on the correctness and applicability of the content, and represented by the IOC (Consistency Index) value. All five units have been evaluated, and this

manual can serve as a guiding document for Wuhan University of Engineering and Technology to carry out daily talent cultivation and improve the quality of talent cultivation in universities.

## 6. Discussion of the Research Results

Based on the results of this study, it can be concluded that the majority of students rated the comprehensive quality improvement of school enterprise vocational skills as the "highest" level ( $\bar{X}$ =4.64, S.D.=0.22), while the majority of enterprises rated the students' practical problem-solving ability and hands-on ability as the "highest" level ( $\bar{X}$ =4.57, S.D.=0.24), with IOC values ranging from 0.8 to 1.0 for all units. This is because today's society and enterprises need to cultivate composite, applied, and high-quality high-level specialized talents, and students are gradually understanding their learning priorities in university. The question setting of the survey questionnaire involves using questioning strategies to extract relevant trajectory questions, and then arranging these questions according to the general rules of deep cooperation between schools and enterprises. Finally, a complete series of questions is formed, and the research conclusions provide important guidance for the construction of the "Talent Training Manual for Universities Using the School Enterprise Cooperation System". A talent training manual with five modules is constructed - Purpose and Significance The current situation at home and abroad, operational mechanisms, system construction, and operational guarantees. Based on the correctness and applicability of the content, and represented by the IOC (Consistency Index) value. All five units have been evaluated, and this manual can serve as a guiding document for Wuhan University of Engineering and Technology to carry out daily talent cultivation and improve the quality of talent cultivation in universities.

## 7. Recommendations for Further Study

- 1) It is necessary to evaluate and study the effectiveness of a manual for talent cultivation and construction jointly conducted by higher education institutions and enterprises in higher education institutions.
- 2) It is necessary to study the factors that affect the ability of higher education institutions and enterprises to jointly cultivate talents.

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**A Construction of Strategic Management Guidelines to Enhance the Degree of Professional Ethics of Teachers in Preschool Education Colleges: A Case Study of Jinan Preschool Teachers College, China**

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**ABSTRACT**

This study has two purposes: 1) to investigate the current situation and problems of teachers' professional ethics in preschool education colleges, taking Jinan Preschool Normal College as an example. 2) to construct a strategy guide to improve teachers' professional ethics in preschool education colleges, taking Jinan Early Childhood Normal Higher Specialized School as an example. There are 201 teachers in Jinan Early Childhood Normal Higher Specialized School, and a sample of 134 teachers were surveyed. The collected data information was analyzed and interpreted, and then presented with indicators such as frequency domain, percentage, mean ( $\bar{x}$ ), and standard deviation (S.D.). Through the interviews conducted by the data analysis team, the Teachers' Professional Ethics Guidance Manual of Jinan Pre-school Teachers' College was constructed to provide reference for subsequent researchers. The main research results of this paper are as follows: 1) Obtaining information on the current situation and problems of professional ethics of college teachers, in which the highest degree of problematic professional ethics of college teachers is "college teachers don't pay attention to the construction of teacher ethics". For 4.57; the highest degree of demand for college teachers' professional ethics is "work seriously and feel the sanctity of the teaching profession". For 4.96. From the data reflected in the questionnaire "Problems of Teachers' Professional Ethics", the results of the survey related to the requirements of teachers' professional ethics show that the teachers' consciousness of professional ethics and emotions are

relatively adequate, but the will and behavior still need to be strengthened." (2) Obtaining guidance on strategies for building professional ethics among college teachers, including: cognitive aspect, emotional aspect, will aspect and behavioral aspect. Through the research study, it was found that this is a very complicated process. The professional ethics of college teachers are influenced by many factors. In cognitive, emotional, volitional and behavioral aspects, teachers show different problems and needs. Only through long-term persistence and continuous improvement can teachers' professional ethics be effectively improved.

**Keywords:** Colleges, Teacher, professional ethics for educators

## **1. Background**

According to Comrade Xi Jinping, President of China, teachers are the engineers of human souls, the bearers of human civilization, and bear the heavy responsibility of the times of spreading knowledge, ideas and truth, and shaping souls, lives and new people. Since the founding of New China, it has been the strategic policy of the Party and the State to develop the country through science and education, and to develop the country through talents, while the benign development of the teaching profession ultimately relies on the teachers, and the construction of teacher ethics and teacher morale is the inherent requirement for creating a high-quality teaching force, and having a high-quality teaching force is the key to promoting high-quality education and providing education to the satisfaction of the people.(Xi Jinping, 2017). China has always attached great importance to the construction of teachers' morality, and the "Sixty Articles of Higher Education" adopted in 1961 clearly defined the duties and professional ethics of teachers, pointing out that teachers should balance the relationship between teaching and scientific research, and the "Teachers' Law of the People's Republic of China" adopted in 1993 stipulated the rights and obligations, qualifications and appointments, and the training and assessment of teachers, strengthening the standardized management of the teaching force and improving the quality of teachers. The Teachers' Law of the People's Republic of China, adopted in 1993, stipulates the rights and obligations of teachers, qualification and appointment, training and assessment, etc. (Xi Jinping, 2017). The needs of the era for theoretical research in construction. The current research on the professional ethics of university teachers is limited to the theoretical level and has not yet fully integrated with practice. It studies and explains the theoretical innovation and content creation of the construction of university teacher ethics in the new era. Innovative guidance for the construction of teacher ethics in universities is crucial for accurately grasping the theoretical framework of teacher ethics construction in the new era. The overall thinking and practical countermeasures have certain theoretical and practical significance.

## **2. Objectives**

1. To look into the current state and issues with professional ethics among educators in colleges of early childhood education, using Jinan Preschool Teachers' College as an example.

2. To develop a case study of Jinan Preschool Teachers' College for Strategic Management Guidelines for Improving the Professional Ethics of Teachers in Preschool Education Colleges.

## **3. Review of Literature**

### **3.1 Concepts/Theories/Related Research**

The term "teacher ethics" was first defined as "teacher professional ethics", and most scholars have directly categorized it as "teacher professional ethics" to understand and study. Teachers' professional ethics is only a part of teachers' morality. With the development of society and continuous changes, the term "teachers' professional ethics" has been gradually put forward by more and more scholars, and the term "teachers' professional development" has been proposed. Liu Shuaiqi, Zhao Jie, Liu Ming and Tian Xiaoyan (2019) conducted a research project titled "On How College Teachers Enhance Teachers' Professional Ethics Cultivation in Educational and Teaching Practice" the findings included that: The basic qualities of college teachers and the basis of teaching and educating people is to have good professional moral cultivation. This paper briefly describes the significance of the improvement of teachers' professional moral cultivation, and gives several methods to improve teachers' professional moral cultivation in educational teaching practice. It is hoped that this paper can provide help for teachers in the process of improving their professional ethics. Chen Yu (2020) conducted a research project titled "Research on Teachers' Professional Moral Cultivation" the findings included that: Teachers' professional moral cultivation is one of the necessary cultivation for teachers to engage in education. Strengthening teachers' professional ethics is not only a need for the development of national education, but also a need for students' growth and teachers' own development. In view of the importance of teachers' professional moral cultivation, it is necessary to deeply explore the contents of teachers' professional moral cultivation, so that the majority of teachers deeply understand the cultivation of teachers' morality, and strive to improve their personal moral cultivation, in order to better fulfill the educational tasks entrusted to teachers by the times. Wei Binbin (2019) conducted a research project titled "Research on the construction of professional ethics of young teachers in colleges and universities" the findings included that: at present, there is a lack of ideological awareness in the construction of professional ethics of young teachers in colleges and universities in China, Lack of responsibility and other problems, in the context of the new era, requires young teachers in colleges and universities to fully recognize the importance of professional ethics, and constantly strengthen the observance of professional ethical norms, colleges and universities and the community to jointly create a good environment for the cultivation of professional ethics, and jointly improve the construction of professional ethics of young teachers.

### 3.2 Conceptual Framework

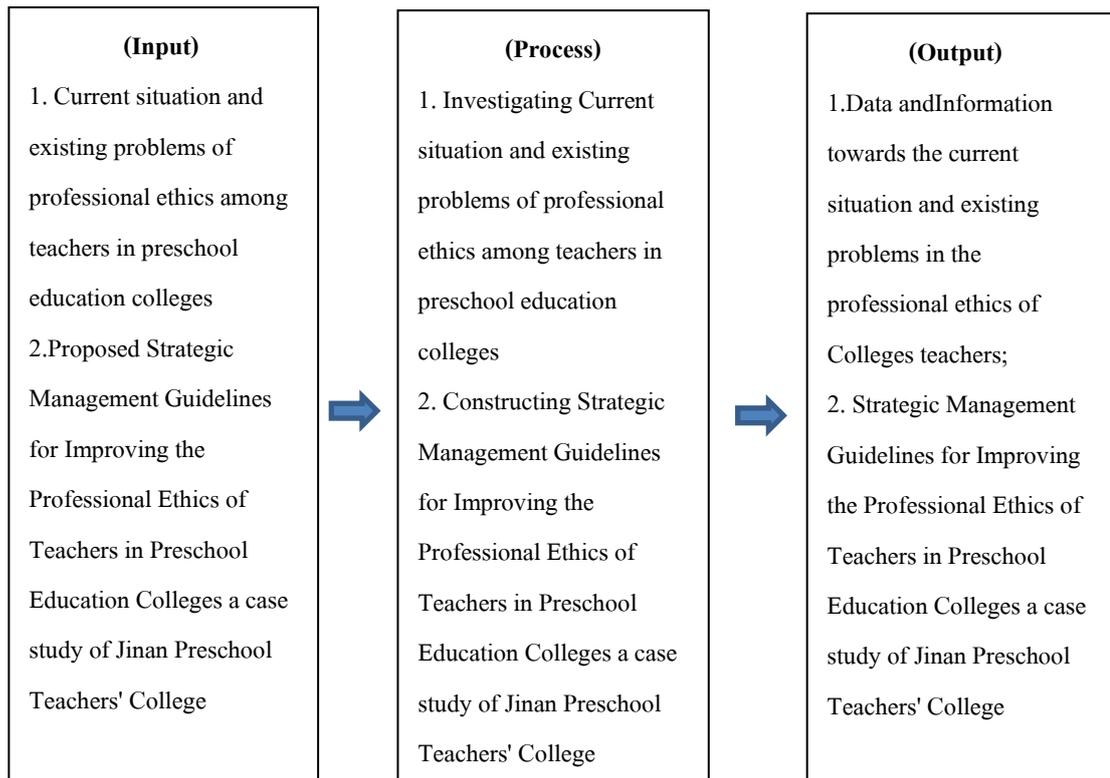


Figure 1 Conceptual Framework

## 4. Research Methodology

### 4.1 Population /Sample

#### 4.1.1 Population:

The study population for this research project was determined to be all 201 teachers in the preschool college of Jinan Early Childhood Normal Higher Specialized School.

#### 4.1.2 Sample:

The sample group for this research project was determined to be all 134 teachers in the preschool of Jinan Early Childhood Teacher Training College. The sample group was from Taro yamane formula (yamane, 1973).

### 4.2 Research Instrument

This research project used a questionnaire for data collection. The questionnaire was divided into groups of teachers. The questionnaire was divided into two parts, 1) general information, and 2) problems and needs of teachers' ethics in higher education. A set of questions for an online interview. To prepare a strategic guideline on professional ethics for college teachers. Five experts (one Thai professor and four professors in the field of professional ethics of college teachers) will give their opinions from interview for construction the strategic guideline for Improving the Professional Ethics of Teachers in Preschool Education Colleges.

#### 4.3 Data Collection

In this research project, the researchers themselves collected data and information from the sample group. The sample group was informed of the purpose of data collection and made an appointment. The researchers submitted a permit letter in advance to the school director, requesting permission to collect data and information from the sample group of Jinan Preschool Teachers College.

#### 4.4 Data Analysis

Analyze and interpret the collected data and information, and then represent them by frequency, percentage, average, and standard deviation (S.D.). Use the Five Point Likert Rating Scale to evaluate the needs and issues of respondents in professional ethics of college teachers.

In the average score range (Wongwanich, 2005).

### 5. Research Results

#### 5.1 Problems and needs of teachers' professional ethics in higher education

Table 1 Problems and needs of teachers' professional ethics in higher education

Problems		$\bar{x}$	S.D.	Level of problems
Problems				
cognitive aspects	1. Colleges and university teachers do not pay attention to the moral and ethical development of teachers.	4.57	0.58	Highest
	2. Under the pressure of the social environment college teachers can not adhere to their professional ethics.	4.11	0.28	high
	3. The main thing needed to influence the orality of teachers in colleges and universities is the social climate.	3.35	0.20	Medium
emotional aspects	1. You find it difficult to handle some things for your students.	3.11	0.48	Medium
	2. There is no need to proactively advise schools or relevant authorities to strengthen the professional ethics of teachers.	2.35	0.20	Low
	3. Taking one's work seriously has nothing to do with the sanctity of the teaching profession.	1.25	0.66	Lowest

will aspect	1."Being a teacher" has a low status in the professional ethics of teachers.	1.95	0.46	Lowest
	2.It is not important to assess professional ethics in teacher selection.	1.35	0.40	Lowest
	3.You believe that progress in teacher ethics is not related to school development.	1.13	0.78	Lowest
behavioral aspects	1.Your college does not emphasize teacher ethics.	1.95	0.76	Lowest
	2.You are reluctant to reflect on your educational behavior.	1.91	0.66	Lowest
	3.Teacher-student relationships in general.	1.20	0.81	Lowest
<b>needs</b>				
cognitive aspects	1.The main thing needed to influence the morality of teachers in colleges and universities is the social climate.	4.69	0.24	Highest
	2.Teachers in higher education need to pay particular attention to the development of teacher ethics.	4.67	0.45	Highest
	3.Under the pressure of the social environment college teachers need to adhere to their professional ethics.	4.59	0.58	Highest
emotional aspects	1.The seriousness of one's work is required to have a sense of the sanctity of the teaching profession.	4.96	0.76	Highest
	2.The profession of teaching is very important.	4.86	0.57	Highest
	3.Patience and care are needed to handle all things for the students.	4.79	0.52	Highest
will aspect	1.Professional ethics need to be assessed in teacher selection.	4.61	0.31	Highest
	2.The development of the school requires the advancement of the teacher's work ethic.	4.57	0.26	Highest
	3.You need to uphold the ethics of the teaching profession no matter what obstacles you encounter.	3.62	0.29	High
behavioral aspects	1.Teachers need to be life coaches for their students.	4.65	0.37	Highest
	2.Teachers and students are mentors and friends.	4.32	0.46	High
	3.Teacher development requires improved teacher ethics.	4.11	0.51	High

As can be seen in Table 1, the most problematic aspect of perception is "1. College teachers do not pay attention to teacher ethics." ( $\bar{X}=4.57, S.D.=0.58$ ). In the aspect of emotion, the most problematic was "You find it difficult to handle some things for your students" ( $\bar{X}=3.11, S.D.=0.48$ ). In the aspect of will, the most problematic was "1. Being a teacher is not high in the professional ethics of teaching" ( $\bar{X}=1.95, S.D.=0.46$ ). In terms of behavior, the most problematic was "Your college does not emphasize teacher ethics" ( $\bar{X}=1.95, S.D.=0.76$ ). According to Table 1, the cognitive aspect that has the most needs is "1. The main thing needed to influence the morality of teachers in colleges and universities is the social climate." ( $\bar{X}=4.69, S.D.=0.24$ ). In terms of emotion, the most needed is "The seriousness of one's work is required to have a sense of the sanctity of the teaching profession." ( $\bar{X}=4.96, S.D.=0.76$ ). In terms of will the most needed is "1. The development of the school requires the advancement of the teacher's work ethic." ( $\bar{X}=4.57, S.D.=0.26$ ). In the area of behavior, the most needed was "Teachers need to be life coaches for their students." ( $\bar{X}=4.65, S.D.=0.37$ ).

## **5. 2 Strategic Management Guideline for Jinan Preschool Teachers' College Professional Ethics**

The ultimate goal of the formation and development of the college teachers' profession is to improve the comprehensive quality of teachers and create an excellent teaching team. Based on the results of the survey, as well as the regulations related to teachers' professional ethics, a guidebook of professional ethics for college teachers (Jinan Early Childhood Teacher Training Higher Specialized School) is formulated, which includes four chapters: 1) Cognitive Aspects of Professional Ethics for College Teachers; 2) Emotional Aspects of Professional Ethics for College Teachers; 3) Volitional Aspects of Professional Ethics for College Teachers; and 4) Ethical Behavioral Aspects of Professional Ethics for College Teachers. Each chapter is accompanied by exercises and tests. Learners are expected to practice and complete the tests, reflect on test scores, and make targeted improvements after studying.

## **6. Discussion of the Research Results**

As a developing country, China needs to maintain a high rate of forward development for a certain period of time in order to be in a relatively favorable position in international competition. To realize this strategic purpose, high-quality talents are indispensable, and the building of talents in all walks of life is mainly through school education, and the development of education depends on teachers. Therefore, the teacher's moral cultivation and the future status of the country are closely linked together. The government should create a favorable social atmosphere. The current status of professional ethics of teachers in China's colleges and universities is worrying, so effective measures should be taken to further strengthen and improve the work of professional ethics of school teachers. At present, China is simultaneously undergoing a great change in the mode of economic production, science and technology, the new moon, the great adjustment of the interest class and the great change of values, diversified various trends of thought in a certain environment of violent collision, people's basic value orientation diversification. First of all, under the new situation, college teachers should set up a correct outlook on life and values, and in front of the diversified value orientation and value standards, they must firmly

believe in communism and have confidence in socialism, think rationally about their own outlook on life, and tamp down every brick for their healthy and fulfilling life path planning. Secondly, they should constantly improve their knowledge structure quality, accumulate personal social life experience, analyze and solve problems with materialistic and dialectical methods, improve thinking ability, proactively analyze and defend various phenomena in the society under the new situation, and realize the adjustment of the mentality and make various responses. Finally, college teachers must improve their social experience in all aspects, strengthen the understanding of all kinds of new things, new phenomena, learning, improve self-regulation ability, so as to enhance the social adaptability, and continue to improve their ideological and political quality and professional moral cultivation level. Only by continuously improving teachers' ideological and political quality and professional moral cultivation, the learning style, teaching style and school style of colleges and universities will be fundamentally improved, the relationship between teachers and students will be more harmonious, and the results of education and teaching will be synchronized to improve, and ultimately achieve the promotion of China's long-term and efficient progress in the cause of education.

## **7. Recommendations for Further Study**

Higher education in China has become a key and indispensable element of education after a period of rapid progress in the recent past. Higher education has done a lot of work and dedication to the popularization of education, and has trained generations of highly qualified professionals for the socialist cause. Teachers in higher education are to be credited for this. Most of them have excellent professional ethics, which strongly guarantees the achievement of national education goals. However, due to the influence of various factors, the decline in the level of professional ethics of college teachers is serious, and it is urgent to strengthen the level of teacher ethics of college teachers. This paper mainly through combing, study related school information, make full use of a variety of media to collect, investigate the basic information of the research object, and do our best to seek truth and pragmatism. For the school, the government, society, and teachers themselves to put forward proposals. The various problems and issues that colleges and universities are currently facing are a necessary part of the exploration of the development of higher education, but they are all temporary and can be overcome and completely changed. Due to the limitations of the author's ability to strengthen the professional ethics of teachers in colleges and universities, the suggestions and ideas may be superficial, and I hope to throw diamonds to attract better countermeasures, so as to promote the development of higher education and fast and good.

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## **The Development of Dance Training Course Based on Problem-Based Learning Model to Improve Dance Ability of Undergraduate Students**

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### **ABSTRACT**

The purposes of this research were 1) to development of dance training course based on problem-based learning model to improve dance ability of undergraduate students and 2) to compare students' dance ability before and after the implementation base on problem-based learning model. The sample group included 30 third-year students from preschool education major of university, in the first semester of the academic year 2023, those who obtained through cluster random sampling. The research instruments included 1) dance training course and curriculum activity plans based on the problem-based learning model and 2) dancing ability assessment form. Data were statistically analyzed by mean, standard deviation, and t-test of dependant sample.

The results were found that:

1) Developing dance training course based on problem-based learning model for undergraduate students, the course include: module 1 basic knowledge of culture and dance, module 2 the movement of dance, module 3 create the dance segments, 12 hours in total. And measure students' dance ability before and after course, it was found that students' dance ability has been improved.

2) Using dance training course based on problem-based learning model, the dance ability of students after class is significantly higher than before class, with statistical significance at the level 0.01.

**Keywords:** Training course, Problem-based learning model, Dance ability

### **1. Introduction**

Dance originates from the labor practice of human survival and development and the needs of other kinds of life practice. Combined with poetry and music, it is one of the earliest art forms in human history. In

the primitive society, people live in groups, dance is the simulation of teaching labor skills, practicing fighting skills, physical exercise, seeking spouses, witchcraft, religious sacrifice and other activities. It is an important means to exchange emotions, thoughts and vent their inner emotions.

As a teaching model, problem-based learning model was proposed by Howard Barrows, an American neurology professor, in the 1950s. Zheng Jianbin (2021) concluded that: Howard Barrows integrated clinical medical problems into classroom teaching. Although students recite a lot of theoretical knowledge due to the complex clinical medical symptoms, there are still many problems in practical operation. The disconnection between theory and practice is very common. Let students have a better grasp of medical methods. Stentoft (2019) explored that problem-based learning model programs can increase student engagement and motivation and help students develop competencies related to medical research. Wang Tao (2019) put forward that problem-based learning model is a new teaching model, it will be the student in a chaos, the structure of the bad situation, make students become the master of the situation, starting from the problems in real life to provide teaching materials, stimulate students to think, to explore, to learn the knowledge required to solve this problem, the final step by step to solve the problem. As an effort to improve classroom learning activities, The model of problem-based learning model by Zulyusri (2019) takes genetic material as the research object and is divided into two cycles. Each cycle consists of four phases: planning, implementation, observation and reflection. The tool used in this study was the students' observation sheets, as a form of reflection for each cycle, and the results showed that the learning activities of the students who applied the problem-based learning model model were divided into better categories.

Compared problem-based learning model with traditional teaching models, problem-based learning model focuses on students and makes students become the main body of learning, which changes the teacher's dominant position in class and makes learning based on questions. Different from the traditional teaching mode, it emphasizes student-centered and problem-centered design and development. Learners solve problems in specific situations together through group discussion, acquire methods and abilities to solve problems, and acquire the ability to independently explore and acquire knowledge. In daily teaching activities, problem-based learning model has a disadvantage, that is, the content of the course is less than the traditional course, and students focus on solving problems, so students cannot acquire a lot of basic knowledge from classroom learning. When used to develop a training course for students, the courses based on problem-based learning model has several important benefits: 1) develops critical thinking skills, 2) increases student engagement, 3) enhances knowledge retention, 4) fosters collaboration and 5) prepares students for the workplace.

In the researcher design the development of dance training course based on problem-based learning model to improve the dance ability of undergraduate students, by implementing the problem-based learning model, the average scores of dance ability before class for 30 students in third-year of preschool education major in Lijiang Teacher College is 14.47 points, 24.07 points after class, and the difference in before and after average scores is 9.6 points, indicating that the scores after class are higher than before class. All of the students already have in the previous semesters learning the basis of professional course, have the basic professional abilities, so

this dance training courses will help students to solve problems in the specific situation, improving students' dance ability, improve students' learning interest, enhance students' learning initiative, cultivate students' comprehensive ability, leading to better learning outcomes.

## **2. Research Objective**

1. To development of dance training course based on problem-based learning model to improve dance ability of undergraduate students.
2. To compare students' dance ability before and after the implementation base on problem-based learning model.

## **3. Literature Review**

### **3.1 Problem-based learning model**

Burrows (1980), the founder of problem-based learning model, regarded problem-based leaning model as a model of learning in the process, believing that learners should learn in the process of understanding and solving problems, and the learning process should be controlled by themselves. The way to acquire knowledge is to solve problems and integrate knowledge by themselves. Bridges (1992) argue that problem-based learning model is a student-centered approach to solving real problems by framing lectures with problems as the beginning of learning. After entering the 21st century, with the maturity of problem-based learning model, it gradually penetrated into more fields and stages. Treadwell (2018) proved through experiments that problem-based learning model played a positive role in physical education, especially in improving students' physical literacy. Hmelosilver (2004) proposed in the article that problem-based learning model means that teachers first determine learning objectives, then set problems, and finally students solve problems in group cooperation, so as to improve students' understanding and learning skills. Lv (2022) Problem-based leaning model is a teaching model that puts learning in a complex and exploratory problem situation, takes students as the main body of the class and learns the biological knowledge behind the problem by making students solve problems, so as to cultivate learners' multiple abilities in the process of solving problems.

### **3.2 Training course based on problem-based learning model**

A structured program that focuses on active learning and problem-solving through the use of real-world problems or scenarios. In this model, learners are presented with a complex problem or challenge and are encouraged to work collaboratively to develop a solution. The training course is designed to promote critical thinking, problem-solving, and collaboration skills among the learners. The instructor acts as a facilitator, guiding the learners through the problem-solving process and providing support and feedback as needed. The training course based on problem-based learning model typically includes the following steps:

Step 1: Problem design: according to the curriculum activity plan and teaching objectives of dance training courses, the teaching content is determined, the problems are designed according to the dance content of

the class, and the students are required to find relevant literature and videos about the problems in the teaching process, and carefully search and practice.

Step 2: Set up situation: teachers decide the teaching content before class, design situations, and guide students to think and explore the problems actively, help students to find problems during learning, and learn to analyze these problems, find out the causes of these problems and solve these problems in time, and finally improve students' ability of active inquiry and learning.

Step 3: Group Work (analyze the problem and solve the problem): group member search and collect information, study, discuss together to solve the problems.

Step 4: Presentation and communication: groups share their problems result with other groups, improve their thinking skill and also improve their confidence to show themselves.

Step 5: Evaluation and summary: evaluation include group evaluate each other and evaluate themselves, then teacher summarize and comment and guide to help students get progress.

Training courses based on the problem-based learning model can be adapted to a variety of subjects and can be delivered in a variety of formats, including classroom-based learning, online learning, or a combination of both. They are particularly effective for developing critical thinking, problem-solving, and collaboration skills, and can be used in a wide range of professional development settings.

### 3.3 Dance ability

Zheng Xuan (2020) announced dance is an art form, a way of education, and a way of conveying ideas. For students majoring in preschool education, dance ability is an important part of preschool education. Good dance ability can help students to correctly understand the world, feel the beauty of life, appreciate the beauty of dance, stimulate the artistic quality of students, and improve the comprehensive quality of students is of great help. Huang Rong (2020) said dance mainly reflects the life, thoughts, emotions and attitudes of preschool children, so there is a very significant difference between it and adult dance.

### 3.4 Research Framework

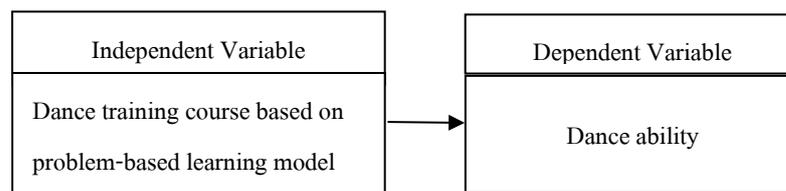


Figure 1 Research Framework

### 3.5 Research Hypotheses

After the training course based on problem-based learning model, the students' dance ability has been improved obviously.

## 4. Research Methodology

### 4.1 Research Design

“The development of dance training course based on problem-based learning model to improve dance ability of undergraduate students” is an experimental study aimed to improve dance ability of undergraduate students by using problem-based learning model. This research is experimental research. One group Pretest - Posttest Design was used with the following experimental design:

Table 1. Experimental design.

Group	Pretest	Experimental	Posttest
R	O <sub>1</sub>	X	O <sub>2</sub>

The meaning of the symbols used in the experimental design.

R	means	Random Sampling
X	means	experimental
O <sub>1</sub>	means	Pretest
O <sub>2</sub>	means	Posttest

### 4.2 Population and Sample

Population: The population of this research was 300 third-year students majoring in preschool education of university, 10 classes in total and 30 students in each class.

Sample: The sample group of this research was 30 students from Class 5, Grade 3 majoring in preschool education in the first semester of the academic year 2023 of university, through the random cluster sampling method.

### 4.3 Research Instrument

The development of dance training course based on problem-based learning model to improve dance ability of undergraduate students. The research Instruments is as follows:

#### 4.3.1 Training course and curriculum activity plans based on problem based learning model

- 1) Use as a guide for developing through learning objectives, content, guideline for organizing measurement and assessment of curriculum activity.
- 2) Based on the index analysis the core learning content, set learning objective, learning content, and learning time.
- 3) Study of concept, theories related to the theory from document, textbook, and related to the research to create a new curriculum activity plan.
- 4) The researcher formulated 3 curriculum activity plans by using problem-based learning model and selected 3 modules: 1) basic knowledge of culture and dance, 2) the movement of dance, 3) create the dance segments, 12 hours in total.

5) Each curriculum activity plan in detail according to problem-based learning model: content, time, objective, concept, curriculum activity, instructional media, measurement and evaluation.

6) Submit the completed curriculum activity plan to the tutor to check the consistency applicability of the plan, make modifications according to tutor's suggestions.

7) Submit the revised curriculum activity plans to 3 experts. The consistency indicator of each evaluation content is greater than or equal to 0.5 and it's considered suitable for research. The ICO value for each question in this evaluation criteria is 1.00.

#### **4.3.2 Dance Ability Assessment Form**

1) This is the assessment form created by the researcher, which is divided into 10 evaluation contents. Analyze the learning content dance ability consistent with the curriculum activity plan.

2) learn theories and methods of dance ability and learn assessment from the literature and relevant research.

3) According to the definition and dimensions of dance ability, referring to previous researchers' dance ability evaluation instruments, the dance ability evaluation standard is designed. The scoring criteria and corresponding score have been established for all 10 evaluation points: 1 point, 2 points, 3 points, and the full score is 30 points in total. Different score represent varying degrees of dance ability. 27-30 points represent is strong, 23-26 points represent relatively strong, 18-22 points represent general, 14-17 points represent relatively weak, 10-13 points represent weak.

4) The consistency indicator of each evaluation content is greater than or equal to 0.5 and it's considered suitable for research. The ICO value for each question in this evaluation criteria is 1.00. Check the reliability of measurement standard using Cronbach's  $\alpha$  Coefficient=0.90, which can be used for research.

#### **4.4 Data Collection**

1. Invite 3 relevant professional scholars and experts, issue official documents of Bansomdejchaopraya Rajabhat University professional scholars and experts, and provide information on research content and research tools: curriculum activity plans and dance ability evaluation criteria for consideration of the goal alignment index: IOC. Collect IOC inspection data from 3 professional experts.

2. This study is an experimental study which is according to the research tools developed by the researchers, scores were carried out before and after the experiment, and evaluation data were collected.

#### **4.5 Data Analysis**

1. Analyzed and verified the effectiveness of the Training course and curriculum activity plans based on problem-based learning model and dance ability assessment form scoring criteria, taking the consistency index as the consideration standard (objective consistency index: IOC). And check the reliability of measurement standard using Cronbach's  $\alpha$  Coefficient which can be used for research

2. Analyze basic student information by finding hundreds and percentages, including analyzed musical rhythm skill of students before and after the implementation of the experiment was scored. Using the

data obtained from the experiment to analyze the statistical data through the mean value, standard deviation and t-test for dependent samples.

## 5. Research Findings

By implementing the problem-based learning model, the average scores of dance ability before class for 30 students in third-grade of preschool education major in university is 14.47 points, 24.07 points after class, and the difference in before and after average scores is 9.6 points, indicating that the scores after class are higher than before class.

1) Development training course based on problem-based learning model for undergraduate students, Training courses include: module 1 basic knowledge of culture and dance, module 2 the movement of dance and module 3 create the dance segments, training course in total 12 hours. it was found that students' dance ability has been improved.

2) The researcher analyzed the data and used mean, standard deviation, and t-test dependent to analyze the scores of students' dance ability before and after class. The data analysis results are shown in Table.

Table 2. Comparison of dance ability before and after class by implementing the problem-based learning model

Dance ability	n	Full scores	$\bar{X}$	SD.	t	p
Before class	30	30	14.47	2.70	36.80**	0.00
After class	30	30	24.07	2.75		

\*\* Statistically significant at level 0. 01 ( $p < 0.01$ )

It can be seen from Table 4.2 that the average score of dance ability of 30 students in third-grade of preschool education major in Lijiang Teacher College after class is higher than the average score before class, indicating that students' dance ability after class is higher than before class.  $P < .01$  indicates statistical significance at the 0.01 level. By implementing the problem-based learning model on students, their dance ability after class is significantly higher than that before class. This is consistent with the research hypothesis.

## 6. Discussion

The development of dance training course based on problem-based learning model to improve the dance ability of undergraduate students. Give full play to the principal position of students in the whole learning activity, improve students' learning behavior, including stimulating students' learning awareness, improve students' learning interest, optimizing learning activities, strengthening students' learning evaluation ability, improving interpersonal skills, and promoting the improvement of students' dance ability.

It terms of measurement and evaluation is determined to be an assessment based on actual conditions and to measure according to the learning objectives and in determining the work piece and workload are appropriate in accordance with the learning objective, which is consistent with the research Zheng Jianbin

(2021), Through the research in theory and teaching practice, the researchers believe that the application of problem-based learning model in dance teaching is feasible and effective. Through the analysis of three teaching practice courses, it is found that the change of learning in class is gradually improved, the activity of class is gradually increased, the participation of students is gradually increased, and the enthusiasm is also strengthened. With the deepening of the class, students are willing to share and cooperate with other students, and their interest in learning dance has gradually increased. In the class, the enthusiasm of each group is very high, each group can basically complete its own task, most of the team members can participate in the cooperation, and the dance results can also show the quality of the movement and the beauty of the dance. The results show that: 1) Problem-based learning model can obviously improve the majority of students' interest in learning dance, 2) Problem-based learning model effectively changes students' learning motivation and improves students' initiative in learning dance, 3) Problem-based learning model cultivates students' comprehensive ability, 4) Problem-based learning model improves the professional quality of dance teachers, 5) It enriches the practical teaching cases of problem-based learning model in dance course. This study develop a dance training course based on the problem-based learning model with five steps, the advantages of this training course is specific objective, improve students' learning interest, enhance students' learning initiative, cultivate students' cooperate ability. The research results show that after the implementation of dance training course based on problem-based learning model, the average score of students' dance ability is higher than before implementation, and the difference is statistically significant at the level of .01, indicating that the problem-based learning model can promote the improvement of students' dance ability.

The conclusions of this study are consistent with research Lv Qing (2022), Lv Qing designed the questionnaire from five dimensions: students' interest in biological experiments, students' cognition of educational value, students' learning situation, experimental teaching methods, and evaluation of the current situation of experimental teaching, and found that students lacked the ability to analyze problems, cooperate, and express and communicate. The research result proves that: 1) the application of problem-based learning model to biology experiment teaching in senior high school has a certain promotion effect on the development of students' ability and quality, 2) problem-based learning model can promote the cultivation of students' core literacy in biology, especially the cultivation of scientific inquiry and scientific thinking.

## **7. Suggestion**

### **7.1 Suggestions for research utilization**

- 1) In the teaching process, due to the different difficulty of learning content in each class and the different foundation of students, the learning content needs to be adjusted in time according to the actual situation.
- 2) The questions proposed by the teacher should be designed according to the actual situation of the students to ensure that the students are clear about the content of the questions.
- 3) According to the actual teaching situation, teachers should design diversified evaluation methods.

## 7.2 Suggestions for future research

The research of problem-based learning model in dance teaching is a long-term research activity, and the improvement of students' dance ability requires a lot of time and long-term monitoring. In this study, only three courses were offered for Tibetan dance, and certain positive effects were achieved in the short term. However, the obvious differences of students as a whole should be observed. Problem-based learning model should be applied to a long-term dance course.

## 8. Acknowledgement

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## **English Writing Difficulties Encountered by Thai EFL Students**

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### **ABSTRACT**

This study investigated the problems and difficulties Thai (EFL) undergraduate students encountered when writing in English. The participants were 352 first-year students from one public university in southern Thailand. The research was designed as a mixed-methods study employing quantitative and qualitative methods in data collection. A questionnaire and semi-structured interviews were used to collect data for this study. The findings indicated that the English writing difficulties experienced by the students were mostly related to linguistic problems, insufficient vocabulary and grammatical knowledge, and limited ability to develop their ideas for writing. Additionally, the participants stated that they had affective problems, which caused them to perceive writing in English more challenging than the other language skills. Consequently, it is recommended that linguistic knowledge, particularly in terms of vocabulary, should be considered while seeking solutions to challenges encountered in English writing within this context. Moreover, teachers should cultivate a supportive environment that fosters positive thinking among their students, thus helping them develop their competence and confidence in writing English.

**Keywords:** English writing, difficulties, Thai EFL students

### **1. Introduction**

Writing in English is becoming an increasingly vital skill across educational and professional contexts in countries where English is not the official language. (Iamsiu, 2014). The individuals who speak English and the settings in which it is spoken have seen profound transformations in recent decades. It is now used by many more people worldwide and for many more purposes than it used to be in all sorts of social settings (Renandya & Widodo, 2016). Since acquiring a good command of English is an increasingly vital component of employment in today's global economy, the problem may lead to an even more serious situation after individuals have

completed their higher education and entered the workforce because their potential employers always require their prospective workers to have a strong command of English to communicate a particular set of thoughts successfully. Therefore, focusing on writing ability, individuals with weak writing skills have a lower chance of being employed than those who have strong writing skills. (Iamsiu, 2014)

With regard to the problems in the writing classroom, Ling (2016) stated that since many English instructors learn how to teach writing by only imitating their writing teachers, they need to be made aware of the different approaches that can be applied in teaching English as a second language writing in the classroom. In addition, Graham's (2018) research showed that insufficient writing instruction in most primary and secondary schools paves the way for writing class issues. In his research, additionally, he listed four indicators associated with insufficient writing instruction. The first indicator was that most instructors needed to spend more time teaching writing (Brindle et al., 2016). The second indicator of insufficient writing instruction was that students in a classroom setting did not write regularly. Students participated in writing activities once or twice throughout the school year, although instructors often gave a range of writing assignments (Koko, 2016). The third indicator of insufficient writing instruction was the use of instructional techniques in which the students were not involved in learning. Lastly, although much of the writing today is done digitally outside of school (Freedman et al., 2016), writing instruction in the classroom was still in typical ways.

In the Thai higher education context, it has been found that writing is the most difficult of the four English skills for EFL students to develop (Boonyarattanasoontorn, 2017). Students in Thailand face a variety of challenges when it comes to writing. Much as English is taught as a compulsory subject and numerous writing courses are available, Thai undergraduate students still struggle to acquire writing competence (Bennui, 2016; Boonyarattanasoontorn, 2017; Phuket & Othman, 2015; Watcharapunyawong & Usaha, 2013). One possible factor is the misconception about communication. That is, when focusing on communication, people tend to place an excessive amount of significance on their ability to speak the language. As a direct result of this, teachers and students place a significant amount of emphasis on oral communication, thinking that they speak better English if they communicate more. On the other hand, it is also important to note that this point of view is controversial in that communication may also be performed by writing (Padgate, 2008).

## **2. Research Objective**

The main purpose was to investigate Thai EFL undergraduate students' problems and difficulties when writing in English.

## **3. Literature Review**

Writing is one of the four fundamental skills in the field of English language instruction. According to Brown (2001), writing may be defined as putting thoughts onto paper to convert ideas into concrete language, refine central concepts, and establish a logical and organised framework. Many academics have described writing in different ways. According to Brown (2001), writing is perceived as a cognitive activity. Hasani (2016) argues that several aspects might potentially influence the progression of students' English writing abilities. The factors

contributing to this issue encompass a range of variables, including diminished learner motivation and insufficient time allocated for writing activities, limited opportunities for reading and writing practise, inadequate feedback, and commentary on students' written assignments from instructors, a dearth of teaching resources and facilities, overcrowded classrooms, ineffective teaching methodologies, and the influence of students' social backgrounds. Research has supported the impact of limited opportunities for free writing on learners' creative writing abilities. Unfortunately, many instructors do not incorporate this practise in their classrooms. Consequently, this may have unfavourable consequences for learners' development of academic writing skills (Alfaki, 2015).

The successful completion of writing tasks requires an adequate amount of time since these activities vary in their requirements at different stages. Considering this, students must be given enough time to engage in activities such as editing, rewriting, consolidating fragmented thoughts, effectively arranging diverse concepts, and crafting precise writing draughts. The attainment of proficiency in English writing is contingent upon the provision of enough time for engaging in academic writing activities. The limited amount of time available to students hinders their ability to effectively express their thoughts in writing, resulting in a decline in their creative writing abilities (Alfaki, 2015). Educators have significant challenges in cultivating genuine gratitude and assigning meritorious ratings to their students. Nevertheless, it is vital that most English educators should consider this approach while instructing students in English composition and literary comprehension inside the educational setting.

According to Alfaki (2015), educators need to provide enough instruction and support to their students to enhance their writing skills. Alfaki (2015) asserts that linguistic challenges, such as grammar, mechanics, sentence structure, and diction issues, impede students' ability to write proficiently in English. Similarly, according to Alfaki (2015), the absence of desire, inadequate time allocation, insufficient practise, and inadequate instructor feedback contribute to students' difficulties in writing expression. According to Hidayati (2018), the writing capacity of English as a Foreign Language (EFL) students is influenced by factors such as their level of English proficiency, the interference of their native language, their motivation, and their reading habits.

## **4. Research Methodology**

### **4.1 Participants**

A convenience sampling method was used to recruit the participants in the classes for which one of the researchers was responsible. The participants in this study were 352 first-year students who registered in the Everyday English Reading Writing course in the 2nd semester of the academic year 2022 at one public university in Thailand. The reason for selecting these groups of participants was that there are three required fundamental English courses: Everyday English Conversation, Everyday English Reading and Writing, and Effective English Communication. The courses aim to prepare the students for studying at a higher level. The students were taking the Everyday English Reading and Writing course at the time this research was carried out; therefore, it is assumed that these participants had adequate competence with English writing beyond the sentence level.

#### **4.2 Research Instrument**

The questionnaire in this study was adopted based on the factors affecting English writing identified by Al Seyabi and Tuzlukova (2014) and Padgate (2008). The reason for using this instrument was to provide the participants with an opportunity to express their feelings and thoughts on the research phenomenon.

The aim of this instrument was to investigate the participants' perceptions of difficulties in English writing. The questionnaire in this study consisted of 4-point Likert scale items, consisting of both open-ended and closed-ended questions. It was in Thai to overcome linguistic barriers and was validated by three experts in English as a Foreign Language to obtain content validity using the Item-Objective Congruence Index (IOC). The Item-Objective Congruence Index (IOC) was 0.89

A semi-structured interview was employed to obtain more information on participants' opinions on writing difficulties. Thirty students, five from each class, were conveniently selected to participate in the interviews. The interview was in Thai and lasted around 20 minutes per participant. Interview questions were sent to three experts in English as a foreign language, who employed the item-objective congruence index (IOC) to verify content validity. The Item-Objective Congruence Index (IOC) of the interview questions was 0.84.

#### **4.3 Data Collection**

For the convenient purpose, the data were collected during the weeks of the 11th and 12th of the second semester of the academic year 2022. Before completing the questionnaire, the participants were informed of the objectives and details of data collection. Additionally, the participants were informed that there were no correct or incorrect answers and that their responses would not affect their course grades. The questionnaire was administered in the classroom, and all the participants were required to fill in the questionnaire. Each participant was given 30 minutes to complete the questionnaire.

The semi-structured interviews for this research were conducted during the weeks of the 13th and 15th. Each selected participant was informed of the most convenient location and time. The interview was conducted in Thai individually in a classroom setting and lasted around 20 minutes per participant. Before the interview, each participant was informed of the study's purpose and confidentiality.

#### **4.5 Data Analysis**

The data from the questionnaire was analyzed using descriptive statistics, including frequencies, means, standard deviations, and percentages. For the data obtained from the open-ended questions and the interviews, content analysis was employed to code the answers into a meaningful set of categories. The data on the participants' level of agreement with the four-point Likert-scale question items were based on the following criteria for the interpretation. The mean values from 3.26-4.00 were interpreted as strongly agree, the mean values from 2.51-3.25 were interpreted as agree, the mean values from 1.76-2.50 were interpreted as disagree, and the mean values from 1.00-1.75 were interpreted as strongly disagree. The interview data were carefully coded, and themes relating to Thai EFL undergraduates' perceptions of problems they encountered when writing in English were formed. Then, it was summarized and presented in percentages to support the quantitative finding.

## 5. Research Findings

The data obtained from the questionnaire revealed the students' problems in English writing. The results are shown in Table 1 below.

Table 1 Students' problems and difficulties in English writing

NO	Statement	$\bar{X}$	SD	Interpretation
1.	I feel that writing is the most difficult skill compared to other skills.	3.52	0.69	Strongly Agree
2.	I feel that my basic grammar knowledge is insufficient to write in English.	3.56	0.51	Strongly Agree
3.	I feel that I have limited knowledge of vocabulary to write in English.	3.60	0.53	Strongly Agree
4.	I have problems in spelling English words.	2.82	0.78	Agree
5.	I don't know how to use punctuation marks.	2.96	0.85	Agree
6.	I don't have enough ideas about the topics that my teacher asks us to write about.	2.41	0.71	Disagree
7.	I don't know how to start writing and developing the content.	3.06	0.78	Agree
8.	I don't know how to put the ideas together in a coherent way.	3.10	0.79	Agree
9.	I have no knowledge on the format and conventions of good writing genres.	3.07	0.73	Agree
10.	I don't know how to revise my writing to make it better.	3.01	0.74	Agree
<b>Total</b>		3.11	0.71	Agree

Table 1 shows the mean and standard deviation of the students' responses to the questionnaire regarding the students' problems and difficulties in writing English. Based on the responses, most students who responded to the questionnaire strongly agreed that their vocabulary knowledge was insufficient to write in English ( $\bar{X}=3.60$ ), their basic grammar knowledge was insufficient to complete their writing tasks in English ( $\bar{X}=3.56$ ), and writing was the most challenging skill to acquire compared to the other three skills ( $\bar{X}=3.52$ ). The students stated that they agreed with the notions that they did not know how to put ideas together in a coherent way while writing in English ( $\bar{X}=3.10$ ), had no knowledge of the format and conventions of good writing genres ( $\bar{X}=3.07$ ), did not know how to start writing and developing the content ( $\bar{X}=3.06$ ), did not know how to revise their writing to make it better ( $\bar{X}=3.01$ ), and lastly had difficulty spelling English words ( $\bar{X}=2.82$ ). The students, however, disagreed with the two notions that they did not know how to use punctuation marks ( $\bar{X}=2.96$ ) and did not have enough ideas for the topics their English teachers had asked them to write about ( $\bar{X}=2.41$ ) respectively.

A thematic and content analysis was employed to identify the main problems in English writing reported by the students. The data obtained from the interviews are shown in Table 2 below.

Table 2 Types of students' problems in English writing (N=30)

NO.	Statement	Frequency and Percentage
1.	Lack of vocabulary	28 (93.33%)
2.	Insufficient grammar knowledge	24 (80 %)
3.	Negative attitudes towards studying English	20 (66.67%)
4.	No motivation to write	17 (56.67%)
5.	I don't know how to organize a paragraph.	15 (50%)

As shown in Table 2, the majority of the learners (93.33%) reported that the most difficult problem in English writing was lacking of vocabulary to write. About 80% of the students reported that they had insufficient knowledge of grammar, whereas 20% of them revealed that they had negative attitude toward studying English. About 17% of the students indicated that one of the English writing problems was they had no motivation to write in English and about 15% of them did not know how to organize a paragraph.

## 6. Discussion

This research aimed to explore Thai EFL undergraduate students' problems and difficulties when writing in English. The findings revealed that the first two problematic areas of the students in English writing were limited knowledge of vocabulary, and grammar was found in several other studies with EFL students (Phuong, 2021; Sabarun, 2019). According to Schmitt and McCarthy (1997), Vocabulary is one of the main elements that second- or foreign-language learners should master before producing language. Thus, to be successful in English writing, the students must have a certain degree of vocabulary and grammatical knowledge. The interview results also showed that most of them had linguistic problems in the area of vocabulary and grammar, as reported by Student 14 and Student 20.

*"I don't have much vocabulary. When I have to write in English, I always use Google Translate"*

(Student 14)

*"My big problems are both vocabulary and grammar. I think they are very important in English writing and I don't have them so I don't want to write by myself. I always use Google Translate"*

(Student 20)

Regarding the students' attitudes toward studying English writing, in the current, it can be seen that most students had negative attitudes toward writing skills. The findings were congruent with the studies by Jabali (2018) and Alkafi (2015). The participants in their research reported that English writing was the most challenging skill in English learning. As written language characteristics differ from spoken language, specialized skills are

required to produce it (Brown, 2001). Thus, EFL learners might be overwhelmed by the writing process intricacy, which in turn might increase negative attitudes toward English writing and also reduce their motivation in English language learning, as reported by Student 3 and Student 17.

*“Writing is very difficult. I don’t like it. Actually I don’t like studying English. I know I can’t do it.”*

(Student 3)

*“I think the most difficult skill in English language is writing. If we don’t have enough vocabulary and grammar how can we write? And as I can see from my friends in the class, they had less knowledge of vocabulary and grammar. Moreover, many of them do not like English. They think that English is difficult.”*

(Student 17)

For the problems of organizing ideas to write, the findings show that many of the students in this study had difficulties putting the ideas together coherently. Since writing is one form of communication that contains the author's purposes, ideas, and opinions, it requires a high degree of organization. To perform a well-organized written work, it is essential for the students to have the ability to develop ideas and information (Alfaki, 2015). The findings from the interviews confirm that the students considered it another English writing problem. Interestingly, most of these students had no experience receiving writing feedback from their English teachers. Moreover, some of them believed that the less ability to develop ideas might result from fewer opportunities to practice writing in both English and Thai, as reported by Student 16 and Student 8.

*“When I studied in Mattayom, the teacher gave me many writing assignments in which I had to draw some picture and decorated the paper. I had high score because of my hand writing and pictures but for my writing there was no feedback from the teacher.”*

(Student 16)

*“I can’t organize my ideas even when speaking. I think if the teacher taught me to write in Thai language first. It might improve my ability in developing the ideas but we did not have many opportunities to write a composition in Thai or even in English.”*

(Student 8)

From the overall information above, the data undoubtedly presented that most of the tertiary students in the current study had both linguistic and affective problems. For the linguistic problems, many of them lacked vocabulary and grammar knowledge, and they had limited ability to organize their ideas in writing. For the affective problems, they had negative attitudes toward English writing. If they are not able to overcome these issues, they might not be able to produce well-organized pieces of writing. Consequently, this may affect their study at a higher level and prevent them from moving further to a higher writing context: academic writing. Thus, effective and appropriate remedies for these problems should be urgently given to the students by the teachers and course designers to assist students in developing their writing skills.

## 7. Recommendations

### 7.1 Recommendations for pedagogical implication

The findings of this study showed that the students had insufficient vocabulary knowledge, so the teachers should provide various activities to enlarge the vocabulary repertoire. One way to do this is through reading, which may increase students' vocabulary. Thus, reading courses should be provided as much as possible to improve students' vocabulary mastery. Moreover, it was found that the students had negative attitudes toward English writing. Therefore, the teachers should play a main role in encouraging the students to believe in their self-efficacy by gradually developing their competence and confidence.

### 7.2 Recommendations for further research

This study was limited to students from a single university; therefore, its findings may not be generalized to other groups of tertiary students in Thailand. It is recommended that further studies include more participants in order to achieve generalization. In addition, it would be more interesting to divide the students into two groups, those with high English proficiency and those with low English proficiency and compare the outcomes of these two groups.

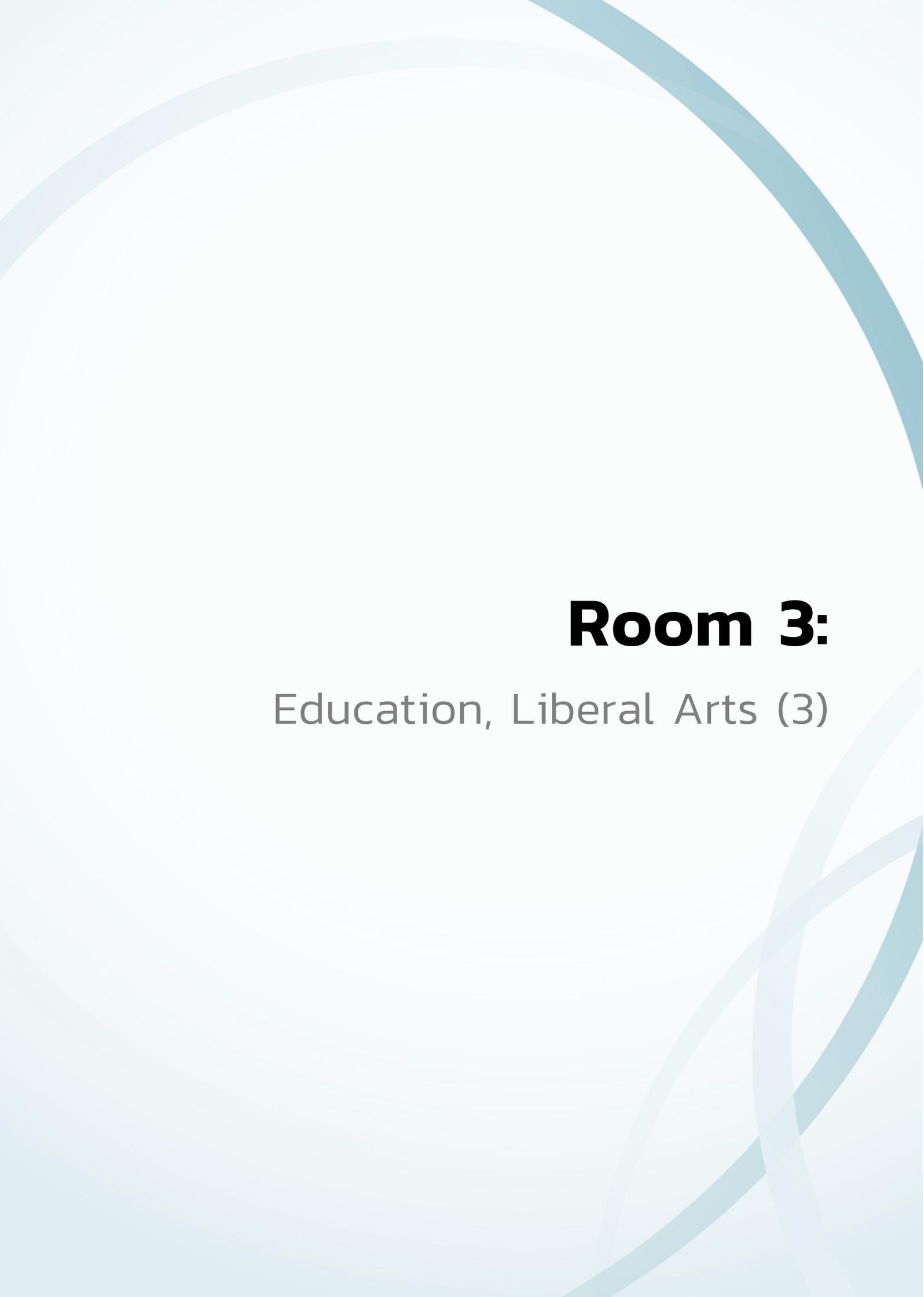
## 8. Acknowledgement

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# **Room 3:**

Education, Liberal Arts (3)

**A Development of a Handbook for Counseling and Guidance towards The Career Path of Medicine Students: A Case Study of Jiangsu Medical College University**

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**ABSTRACT**

The purposes of this study were to: 1) investigate needs of counseling and guidance towards the career path of medicine students, 2) investigate problems of counseling and guidance towards the career path of medicine students and 3) construct a strategic handbook for counseling and guidance towards the career path of medicine students. In this study, Jiangsu Provincial People's Hospital was used as the case study. For the investigation of needs, the population and samples group were divided into two groups; namely, 1) 212 students in the 2023 and 2) 40 teachers. For the investigation of needs and problems, the researcher herself collected the data from the sample group. In this study, questionnaire was used as the tools to collect data. In addition, a set of questions for focus group discussion meeting were also used to gain comments from the specialist. The Likert rating scale was used to rate the degree or level of problems and needs. The questionnaire was evaluated its validity through IOC which was in the range of 0.66 to 1.00. Moreover, its reliability was evaluated using alpha Cronbach coefficient which was 0.8. The results from the research indicated that the needs and problems were rated in the highest level. The handbook composed of the nine units; namely, 1) Cardiopulmonary auscultation 2) ECG interpretation 3) Imaging film reading 4) Medical humanities 5) Medical ethics 6) Medical history collection 7) Case analysis 8) Skill operation 9) Physical examination.

**Keywords:** Clinical training, clinical skills, standardized training for resident physicians

## **1. Background**

The standardized consultation and guidance for resident physicians (referred to as resident consultation and guidance) plays an irreplaceable role in the cultivation of young physicians and the implementation of national graded diagnosis and treatment (Ruan Hengchao, 2019). It refers to medical students who do not directly participate in work after graduation, but receive systematic clinical training as resident physicians in training hospitals. As early as 1993, the then Ministry of Health proposed the concept of standardized training in the form of the "Trial Measures for Standardized Training of Clinical Residents". In 2009, in the "Opinions on Deepening the Reform of the Medical and Health System", the Central Committee of the Communist Party of China and the State Council explicitly requested the establishment of a standardized training system for resident physicians. In 2014, the State Council of the People's Republic of China issued the "Notice of the Health and Family Planning Commission on Issuing Resident Physicians". This trial notice clearly proposes the concept of "standardized consultation and guidance for resident physicians" for the first time, and is receiving increasing attention from people.

## **2. Objectives**

- 1) To investigate needs and problems of counseling and guidance towards the career path of medicine students.
- 2) To construct a strategic handbook for counseling and guidance towards the career path of medicine students.

## **3. Review of Literature**

### **3.1 Concepts/Theories/Related Research**

Composition of standardized counseling and guidance for resident physicians contents and standards of standardized counseling and guidance for residents: counseling and guidance contents include medical ethics, policies and regulations, clinical practice ability, professional theoretical knowledge, Interpersonal communication, etc., focusing on improving clinical standardized diagnosis and treatment ability, giving due consideration to clinical teaching and scientific research literacy; The standardized counseling and guidance standards for resident physicians are a requirement of 'practicality', and the revision of the standards should meet the actual needs of resident counseling and guidance, be in line with the actual clinical teaching, and develop practical and applicable standards. Professional theoretical learning should be guided by clinical practical needs, and the content mainly includes public theory and clinical professional theory.(Chinese Medical Doctor Association, 2022)

### 3.2 Conceptual Framework

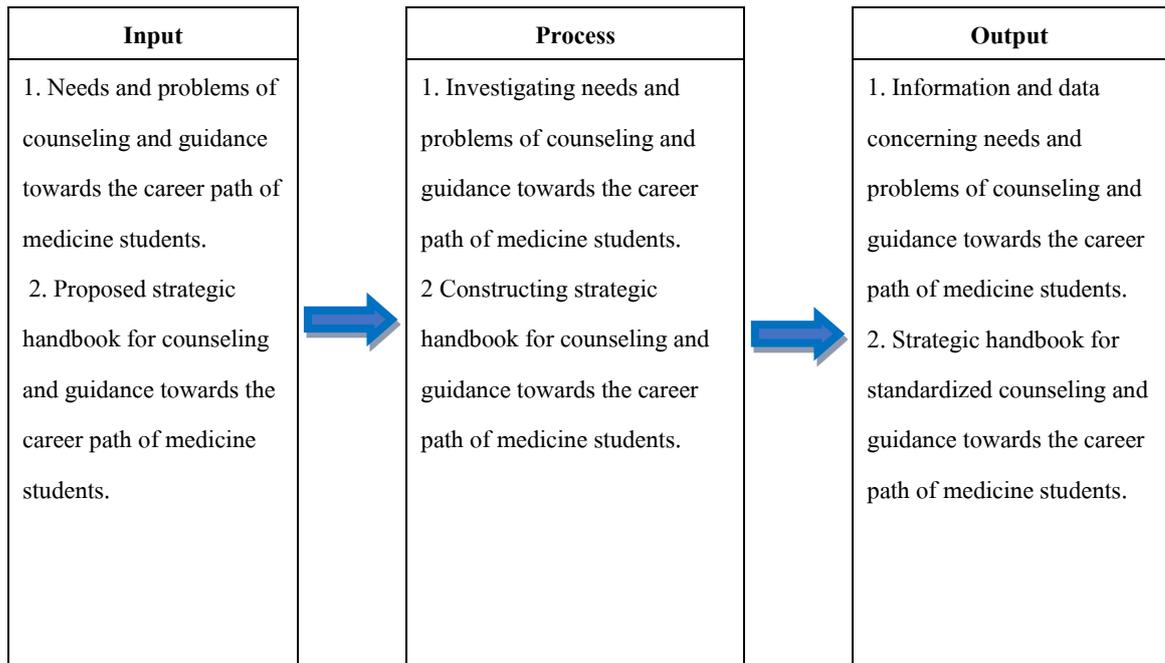


Figure 1 Conceptual Framework

## 4. Research methodology

### 4.1 Population and Samples

In this study, Jiangsu Provincial People's Hospital was used as the case study. The population and samples in this research project were divided into two groups: 1) In 2023, 212 students participated in standardized training for resident physicians, and 2) 40 teachers.

### 4.2 Research Instruments

In this research project, a questionnaire was used for data collection. There are two sets of the questionnaire one for students and the other for teachers. The questionnaire is divided into two parts: 1) General information; 2) Problems and needs in the standardized guidance.

For the construction of the handbook, a set of questions were used for the focus group discussion meeting in order to gain comments and ideas for the correctness and suitability of the handbook.

### 4.3 Data collection

In this research project, for the investigation of needs and problems, the researcher herself collected data and information online via emailing. Moreover, the comments from the specialists collected from the focus group discussion meeting.

### 4.4 Data Analysis

The Data and information collected were analyzed, interpreted and then presented in terms of frequency court, percentage, mean ( $\bar{X}$ ), standard deviation (S.D.). The Five Point Likert Rating Scale was used to evaluate the

level of respondents' needs and problems. Moreover, the comments from the specialists were analyzed through content analysis.

## 5. Research Results

### Part 1 Problems and needs of Counseling and guidance towards the career path of medicine students

Table 1: problems of counseling and guidance towards the career path of medicine students

Questions	n=212		Level of problems
	$\bar{X}$	S.D.	
1) You think that regular training is meaningless for your career	4.65	0.20	Highest
2) You are not interested in regular training	4.55	0.51	Highest
3) you think work training should not be regulated	4.56	0.33	Highest
4) You are not interested in the content of the training	4.64	0.57	Highest
5) You don't like online teaching	4.56	0.47	Highest
6) You don't like offline teaching	4.58	0.28	Highest
7) Clinical teaching has not improved your abilities	4.65	0.21	Highest
8)Regulatory training increases the difficulty of your further education	4.68	0.21	Highest
9) Discipline training takes up your time	4.58	0.48	Highest
10) Discipline training hinders your review	4.66	0.51	Highest
Total	4.61	0.36	Highest

According to Table 1, students rated the problems of counseling and guidance towards the career path of medicine students in the highest level with average score of 4.61 (S.D. = 0.36)

Table 2: Needs of counseling and guidance towards the career path of medicine students

Questions	n=212		Level of needs
	$\bar{X}$	S.D.	
1) Your skills can be improved	4.60	0.41	Highest
2) Your knowledge can be increased	4.55	0.38	Highest
3) Your career planning is needed	4.56	0.20	Highest
4) You should come closer to your teacher	4.66	0.37	Highest
5) Finding a job needs a handbook	4.69	0.50	Highest
6) The training base should be near home	4.58	0.41	Highest
7) It's easy to find a job advisor	4.65	0.52	Highest
8) The handbook can bring you closer to your colleagues	4.55	0.44	Highest
9) The handbook can expand your network	4.58	0.42	Highest
10) The handbook helps to increase work experience	4.69	0.20	Highest
Total	4.61	0.36	Highest

According to table 2, it is indicated that the students rated the needs of counseling and guidance towards the career path of medicine students in the highest level with average score of 4.61 (S.D. = 0.36)

Table 3: problems of counseling and guidance towards the career path of medicine students in the opinion of teachers

Questions	n=40		Level of problems
	$\bar{x}$	S.D.	
1) Regulatory training can bring many problems to hospitals	4.56	0.21	Highest
2) Regulatory training will affect medical activities	4.57	0.48	Highest
3) Teaching equipment is too outdated	4.67	0.32	Highest
4) Teaching influences one's own research	4.59	0.55	Highest
5) Teaching adds a burden to work	4.60	0.45	Highest
6) Teaching affects one's income	4.66	0.24	Highest
7) Teaching takes up rest time	4.60	0.20	Highest
8) Difficulty in finding textbooks that match oneself	4.69	0.20	Highest
9) Too busy to teach students	4.78	0.47	Highest
10) Low learning efficiency of students	4.59	0.47	Highest
Total	4.64	0.36	Highest

According to table 3, it is indicated that the students rated the problems of counseling and guidance towards the career path of medicine students in the opinion of teachers is in the highest level with average score of 4.64 (S.D. = 0.36)

Table 4: Needs of counseling and guidance towards the career path of medicine students in the opinion of teachers

Needs	n=40		Level of needs
	$\bar{x}$	S.D.	
1) Regular training helps improve clinical skills	4.69	0.40	Highest
2) Regulations and training are conducive to promotion to professional titles	4.68	0.37	Highest
3) Someone helps oneself with the experiment	4.59	0.20	Highest
4) Improving students' writing skills	4.59	0.35	Highest
5) Students Get Exercise	4.69	0.47	Highest
6) Students have richer clinical knowledge	4.66	0.42	Highest
7) I have more time to work myself	4.58	0.52	Highest
8) Medical work becomes easier	4.51	0.43	Highest
9) Students can access higher quality resource	4.69	0.41	Highest
10) Significant improvement in students' academic performance	4.59	0.20	Highest
Total	4.62	0.35	Highest

According to table 4, it is indicated that the students rated the needs of counseling and guidance towards the career path of medicine students in the opinion of teachers is in the highest level with average score of 4.62 (S.D. = 0.35)

#### **Part2: Handbook for Counseling and Guidance towards The Career Path of Medicine Students**

According to the findings, there are nine-unit in Handbook for Counseling and Guidance towards The Career Path of Medicine Students; namely, 1) Cardiopulmonary auscultation 2) ECG interpretation 3) Imaging film reading 4) Medical humanities 5) Medical ethics 6) Medical history collection 7) Case analysis 8) Skill operation 9) Physical examination. All nine units were assessed by three experts for the correctness and applicability of the content, expressed as IOC (Index of Consistency) values. All five units were assessed with an IOC value between 0.66 and 1.0, meaning that the handbook was acceptable as Handbook for Counseling and Guidance towards The Career Path of Medicine Students.

### **6. Discussion of the Research Results**

The finding from the research indicated that students and teachers rated the problems of counseling and guidance towards the career path of medicine students in the highest level with average score of 4.61 (S.D. = 0.36) in addition, it is indicated that the students and teachers rated the needs of counseling and guidance towards the career path of medicine students in the highest level with average score of 4.61 (S.D. = 0.36). According to the findings, there are nine-unit in Handbook for Counseling and Guidance towards The Career Path of Medicine Students; namely, 1) Cardiopulmonary auscultation 2) ECG interpretation 3) Imaging film reading 4) Medical humanities 5) Medical ethics 6) Medical history collection 7) Case analysis 8) Skill operation 9) Physical examination. The results from the research are found relevant to Jakub Gasiorowski, Elzbieta Rudowicz and, Krzysztof Safranow (2015) The effect of gender on altruistic motivation was stronger at the end of the study, with females' rating higher. The most favored career paths were associated with non-primary care specializations and work in a hospital. Results of the multivariate logistic regression showed that primary care specializations were more attractive to females, final year students, those from small agglomerations, and those less concerned about high earnings. Preferences regarding sector of work were formed at later stages of training. A preference shift was observed, between Year 1 and Year 6, towards favoring work in the public sector. Predictors of the desire to work in the public sector were: being a male and the final year student, paying less attention to high earnings, wanting certainty of finding work, having a stronger need for interesting and socially important work. A significant decline in the level of interest in seeking employment abroad was observed with the progress of studies. Our findings are likely to provide useful information for educators, policy planners and policy makers.

## 7. Suggestions for further research

1) The research on the effectiveness evaluation of the clinical teaching manual of Jiangsu Provincial People's Hospital in real medical practice must be carried out.

2) It is necessary to study the influencing factors of clinical training in Jiangsu Provincial People's Hospital.

## 8. Acknowledgement

I would like to thank my supervisor, Dr. Uswin Chaiwiwat, under whose kind care and careful guidance this paper was completed. I sincerely admire his profound knowledge, rigorous style, excellent charisma and meticulous care for students. In my graduate studies, Dr. Uswin Chaiwiwat has devoted a lot of efforts, not only in academic guidance, but also in study habits, selfless help and care. I would like to express my sincere gratitude to him for teaching me by example, and I will benefit from his excellent character and rigorous attitude for the rest of my life.

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## **Constructing Strategic Guidelines for Management of Misbehavior of High School Students: A Case Study of Maple Leaf International School, China**

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### **ABSTRACT**

The objectives of this research were: 1) to investigate needs of strategic guidelines for the management of misbehavior of high school students, and 2) to develop strategic guidelines for the management of misbehavior of high school students. In this research, Maple Leaf International School, China was used as a case study. The population was divided into 2 groups; namely, 1) 400 students and 2) 40 teachers/administrators. For the investigation of strategic guidelines for the management of misbehavior of high school students, the sample groups were divided into 2 groups; namely, 1) 196 students and 2) 36 teachers/administrators. The respondents were derived from Krejcie & Morgan formula, and obtained through the stratified random sampling technique. Moreover, the 3 specialists were used for the focus group discussion meetings. For the investigation of needs of strategic guidelines for management of misbehavior of high school students, a questionnaire was employed to collect data from the sample groups online via email. The questionnaire was evaluated for its validity through IOC 0.67 to 1.00. For its reliability, the Cronbach's Alpha Coefficient was 0.83. Moreover, a set of questions were used for the focus group discussion meetings. The data was analyzed through the content analysis and presented in terms of frequencies, percentages, means, and standard deviations. The findings indicated that: 1) most of students and teachers/administrators rated needs of need of strategic guidelines for management of misbehavior of high school students at the "highest" level. The strategic guidelines for the management of misbehavior of high school students composes of 6 units; namely, 1) Compliance with School Regulations, 2) Dressing according to school regulations, 3) Compliance with School Etiquette, 4) Building Human Relations in School, 5) Sexual Education in School, and 6) Participation in School Activities. All the six units were

evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Item -Objective Congruence) values. All six units were evaluated the IOC values from 0.67 to 1.00 meaning that the developed strategic guidelines for the management of misbehavior of high school students were acceptable and could be used as guidelines for the management of misbehavior of Maple Leaf International School in China for the enhancement of quality of the school in both the school image and its educational quality.

**Keywords:** Strategic Guidelines, Management of Misbehavior, High School Students

## **1. Background**

Life is very difficult, must reduce many problems from childhood. “Careful beginning and good end”, this is the inevitable result. Thus, good habits of education is the management of children's lifelong education. It is the basis of healthy development, sustainable development and life-long development to train a generation of young people to develop good civilized behavior. Moreover, this is a foundation project for the improvement of the quality of the Chinese nation. Adolescence is the foundation period of life, but also the best period to cultivate habits. Cultivating students' good behavior habits is the work content that the middle school educators must pay attention to. In a multi-pronged approach, students can cultivate correct cognitive, cognitive and behavioral habits, cultivate their positive awareness of learning, positive attitude towards life, constantly develop themselves, improve themselves, and finally improve their moral quality, make it form an independent consciousness, control emotions, active thinking, develop personality, establish a sound personality, for the future growth and success lay a good foundation. It is a long-term task to cultivate students' civilized behavior and habits. It needs students' long-term efforts and close cooperation among school, family and society, only the middle school students to carry out a systematic and all-round education, students can develop good habits of civilized behavior.

## **2. Objectives**

- 1) To investigate needs of strategic guidelines for the management of misbehavior of high school students, and
- 2) To develop strategic guidelines for the management of misbehavior of high school Students

## **3. Review of Literature**

### **3.1 Concepts/Theories/related/research**

China is an ancient country with a 5000-year history of civilization, and our formative education has a long history. Confucius, the Great Educator of our ancient times, put forward that “less becomes nature and habit becomes nature” has had the long-term influence to the later generation nurturance education. “Good habits are the ever-increasing moral capital stored in the human nervous system,” said psychologist Ushinskiy Roch, who went so far as to assert that “Virtually all education boils down to the cultivation of good habits in children. Ye Shengtao mentioned that education is the cultivation of habits,”, the formation of a habit, not from “Gradually”.

Thus, good habits of education is the management of children's lifelong education. It is the basis of healthy development, sustainable development and life-long development to train a generation of young people to develop good civilized behavior. Moreover, this is a foundation project for the improvement of the quality of the Chinese nation. Adolescence is the foundation period of life, but also the best period to cultivate habits. Cultivating students' good behavior habits is the work content that the middle school educators must pay attention to. In a multi-pronged approach, students can cultivate correct cognitive, cognitive and behavioral habits, cultivate their positive awareness of learning, positive attitude towards life, constantly develop themselves, improve themselves, and finally improve their moral quality, make it form an independent consciousness, control emotions, active thinking, develop personality, establish a sound personality, for the future growth and success lay a good foundation. It is a long-term task to cultivate students' civilized behavior and habits. It needs students' long-term efforts and close cooperation among school, family and society, only the middle school students to carry out a systematic and all-round education, students can develop good habits of civilized behavior. Life is more important than Mount Tai”, life safety education for middle school students is a major work related to the healthy growth of students, healthy people, personality, to cultivate students' safety awareness, enhance students' self-protection awareness, it is of great significance to make up for the lack of safety education in the child discipline, to help students learn to respect life and to form normal behavior habits. It is a long-term and careful work to train students to have safety consciousness and form safe behavior habit. This is not only to start from the small, from the small, but also need school, family, social aspects of education to form a joint force, to complete. One is that the school should attach great importance to the student's safety work, and should improve the student's safety consciousness and standardize the behavior habit through various channels, change the traditional way and method of safety education. The second is to school and family safety education, school and Social Security, education.

### 3.2 Conceptual Framework

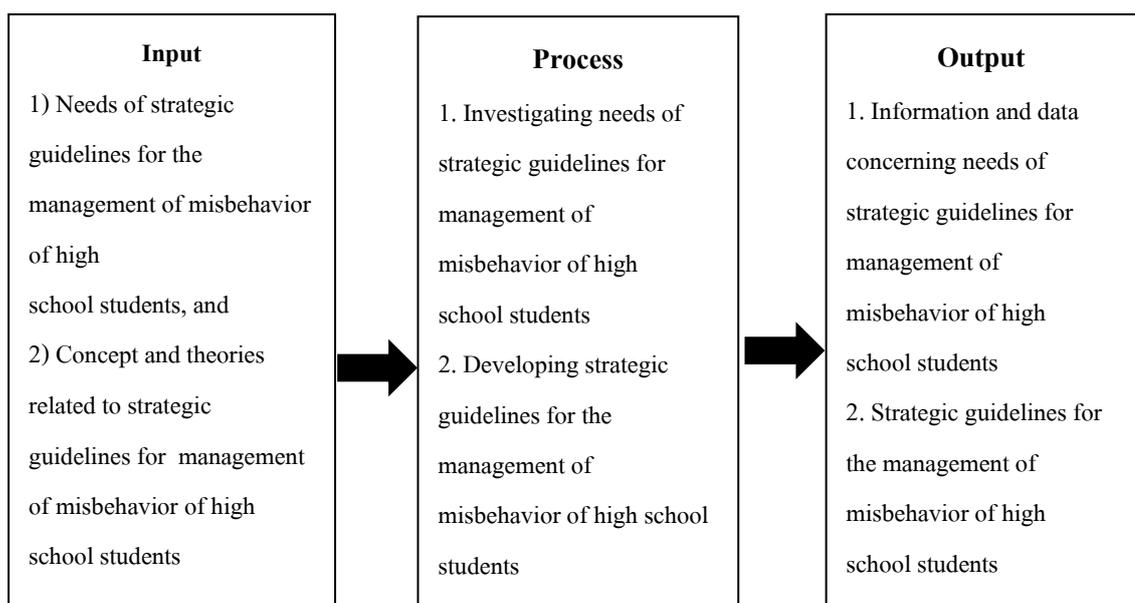


Figure 1 Conceptual Framework

## **4. Reserch Methodology**

### **4.1 Population /Sample Groups**

In this research, Maple Leaf International School, China was used as a case study. The population was divided into 2 groups; namely, 1) 400 students and 2) 40 teachers/administrators. For the investigation of strategic guidelines for the management of misbehavior of high school students, the sample groups were divided into 2 groups; namely, 1) 196 students, and 2) 36 teachers/administrators. The respondents were derived from Krejcie & Morgan formula, and obtained through the stratified random sampling technique. Moreover, the 3 specialists were used as samples for the focus group discussion meetings.

### **4.2 Research Instrument**

For the investigation of needs of strategic guidelines for management of misbehavior of high school students, a questionnaire was employed to collect data from the sample groups online via email. The questionnaire was evaluated for its validity through IOC with the range of 0.67 to 1.00. For its reliability, the Cronbach's Alpha Coefficient was used the value of 0.83. Moreover, a set of questions was used for the focus group discussion meetings.

### **4.3 Data collection**

For the investigation of needs of strategic guidelines for the management of misbehavior of high school students, and , a questionnaire was employed to collect data and information from the sample groups online via email. Moreover, a set of questions were used for the focus group discussion meetings to gather ideas and comments for the correctness and suitability of strategic guidelines for the management of misbehavior of high school students

### **4.4 Data Analysis**

The Data and information collected were analyzed, interpreted and then presented in terms of frequencies, means ( $\bar{X}$ ), standard deviations (S.D.). The Five Point Likert Rating Scale was used to evaluate the level respondents' needs of Needs of strategic guidelines for the management of misbehavior of high school students. In addition, the correctness and suitability of the contents of strategic guidelines for the management of misbehavior of high school students were evaluated and presented in terms of IOC.

## 5. Research Results

### 5.1 Needs of strategic guidelines for the management of misbehavior of high school students

Table 1: Needs of strategic guidelines for the management of misbehavior of high school students

Questions	n=196 (students)		n=36 (teachers/ administrators)		Level of needs
	$\bar{X}_1$	S.D.	$\bar{X}_2$	S.D.	
1) The students need to strongly comply with school regulations	4.52	0.26	4.53	0.24	Highest
2) The existing regulations of the school need to be revised and enhanced.	4.55	0.21	4.53	0.22	Highest
3) For revising the school regulations, both students and teachers/administrators must be cooperated.	4.61	0.32	4.54	0.32	Highest
4) The students need to carefully consider dressing according to school regulations	4.60	0.30	4.55	0.31	Highest
5) The existing dressing according to school regulations need to be revised and updated.	4.55	0.31	4.51	0.22	Highest
6) For revising the dressing according to school regulations, both students and teachers/administrators must be cooperated.	4.54	0.33	4.54	0.25	Highest
7) Students need casual dressing at least once a week.	4.65	0.35	4.51	0.35	Highest
8) School Etiquette needs to be complied with	4.60	0.31	4.55	0.30	Highest
9) The School Etiquette needs to be modernized	4.55	0.21	4.52	0.25	Highest
10) The School Etiquette must be taught during the orientation meeting	4.62	0.32	4.55	0.31	Highest
11) There must be good Relations between teachers and students and among students in School	4.51	0.31	4.61	0.21	Highest
12) There must be activities for Building Human Relations in School during the orientation meeting	4.66	0.32	4.52	0.30	Highest
13) The Sexual Education in School is necessary	4.65	0.20	4.66	0.33	Highest
14) The Sexual Education in School must be taught as a compulsory course	4.66	0.32	4.52	0.32	Highest
15) There must be a lecture on Sexual Education in School during the orientation	4.53	0.23	4.65	0.33	Highest
16) Students need to learn about family planning	4.57	0.31	4.51	0.22	Highest
17) Sexual Education in School needs to be taught by a specialist at least once a month	4.52	0.23	4.53	0.33	Highest
18) Students need to participate in school activities	4.55	0.23	4.66	0.33	Highest
19) School activities enhance building relationship among students and teachers	4.61	0.33	4.55	0.30	Highest
20) There must be a sport day in school at least once a year	4.52	0.24	4.50	0.25	Highest
<b>Total</b>	<b>4.55</b>	<b>0.25</b>	<b>4.56</b>	<b>0.34</b>	<b>Highest</b>

According to table1, it can be indicated that most of the teachers/administrators rated the Needs of strategic guidelines for the management of misbehavior of high school students at the “highest” level ( $\bar{X}$ = 4.56, S.D. =0.34); in the same way, most students also rated the Needs of strategic guidelines for the management of misbehavior of high school students at the “highest” level ( $\bar{X}$ = 4.55, S.D. =0.25)

**5.2 strategic guidelines for the management of misbehavior of high school students**

Table 2: The Index of Item-Objective Congruence (IOC) of the 6 units of strategic guidelines for the management of misbehavior of high school students in terms of correctness and suitability of the contents

Topics/Contents	IOC
1) Compliance with School Regulations	1.00
2) Dressing according to school regulations	1.00
3) Compliance with School Etiquette	1.00
4) Building Human Relations in School	0.67
5) Sexual Education in School	1.00
6) Participation in School Activities	0.67

According to table 2, the strategic guidelines for the management of misbehavior of high school students composes of 6 units; namely, 1) Compliance with School Regulations, 2) Dressing according to school regulations, 3) Compliance with School Etiquette, 4) Building Human Relations in School, 5) Sexual Education in School, and 6) Participation in School Activities. All the six units were evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Item-Objective Congruence) values. All six units were evaluated and possessed the IOC values from 0.67 to 1.00

**6. Discussion of the Reasearch Resultls**

According to findings, it can be indicated that most of the teachers/administrators rated the Needs of strategic guidelines for the management of misbehavior of high school students at the “highest” level ( $\bar{X}$ = 4.56, S.D. =0.34); in the same way, most students also rated the Needs of strategic guidelines for the management of misbehavior of high school students at the “highest” level ( $\bar{X}$ = 4.55, S.D. =0.25). The strategic guidelines for the management of misbehavior of high school students composes of 6 units; namely, 1) Compliance with School Regulations, 2) Dressing according to school regulations, 3) Compliance with School Etiquette, 4) Building Human Relations in School, 5) Sexual Education in School, and 6) Participation in School Activities. All the six units were evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Item-Objective Congruence) values. All six units were evaluated and possessed the IOC values from 0.67 to 1.00 meaning the developed strategic guidelines for management of misbehavior of high school students were acceptable and could be used as guidelines for the management of misbehavior of Maple

Leaf International School in China for the enhancement of quality of the school in both the school image and its educational quality. The findings were found similar to the results of the research project conducted by Farasatkah, M., & Asgharzadeh, N. (2018). The aim of this research was to study the lived experience of students in an old comprehensive university in the capital of Iran. Since the goal of the researchers was to go near the students themselves to reveal the lived and perceived experiences of them with the interpretive paradigm as a methodology. The hermeneutic phenomenological research method was chosen with deep exploratory interviews as a data gathering tool. Deep exploratory interviews were fulfilled with a purposive sample of 25 university students on the data saturation basis. 250 main propositions were found from these interviews. The most important propositions extracted with the thematic analysis method showed that just 30 percent of experiences were positive but 70 percent of them were negative. In addition, the findings from this research are relevant to the ones of Omiunota Nelly Ukpokodu (2020) who conducted research project titled Problematicization of Social Studies Teacher Preparation for Global Competence and Global Perspectives Pedagogy: A call for Change of the findings include that the study utilizes qualitative and practitioner research methodologies. Four factors problematicizing for the preparation of teachers for global competence and global perspectives pedagogy in social studies teacher education are examined: a) competing pedagogical paradigms; b) lack of clarity on global perspectives pedagogy; c) neoliberal ideologies and policies, and d) complicity in new high-stakes teacher licensure assessment. The paper discusses critical implications and recommendations for preparing social studies teachers for global competence and global perspectives pedagogy in teacher education.

## 7. Recommendation for futher study

The research on the effectiveness of the strategic guidelines for the management of misbehavior of high school students needs to be considered and executed.

## 8. Acknowledgement

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**Constructing Strategic Guidelines for Educational Institute Discipline  
Inspection and Supervision for Teachers in Normal University:  
A Case Study of Anshan Normal University in Anshan City**

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**ABSTRACT**

The objectives of this research were: 1) to investigate problems of educational institutes' discipline inspections and supervision system in university, and 2) to develop strategic guidelines of educational discipline inspections and supervision system for normal universities in China. For the investigation of problems of educational institutes' discipline inspections and supervision system in university, the questionnaire was used as a research instrument for collecting data and in formation of the sample groups. In this study, Anshan Normal University in Anshan City was used as a case study. The population and sample groups were 110 teachers and educational administrators. The questionnaire was divided into 2 parts sections, 1) general information, 2) problems of educational institutes' discipline inspections and supervision system in university. The questionnaire was evaluated for its validity in terms of IOC and possessed the range from 0.66 to 1.00. In addition, it was evaluated for its reliability in terms of Alpha Cronbach Coefficient and possessed the value of 0.82. The five-point Likert rating Scale was used for rating the level of problems. Moreover, a set of questions were used for the 3 focus group discussion meetings for gathering comments and suggestions for the development of strategic guidelines of educational discipline inspections and supervision system for normal universities in China. The information and data collected were analyzed through the content analysis method and presented in

terms of percentages, means, and standard deviations. The findings indicated that problems of educational institutes' discipline inspections and supervision system in university were rated in the "Highest" level. -The developed strategic guidelines of educational discipline inspections and supervision system for normal universities in China composed of 6 units; namely, 1) Purpose of educational discipline inspections and supervision system, 2) Composition and main duties of educational discipline inspections and supervision group, 3) Rules for the implementation of educational discipline inspections and supervision team, 4) The main forms and methods of educational discipline inspections and supervision, 5) Principles of dealing with the results of educational discipline inspections and supervision, and 6) The working system of educational discipline inspections and supervision.

**Keywords:** Strategic Guidelines, Educational Institute Discipline Inspection and supervision, Normal University

## 1. Background

The reasons for the researcher to choose this topic for many years, vocational schools in our country have been engaged in the standard training of standard specialists. Thus, theoretical studies of general management problems by V.G. Afanasiev, D.M. Gvishiani, O.A. Deineka, Yu.A. Vasilyeva, Yu.A. Konarzhevsky, V.I. Popovich, A. Fayol, R.Kh. Shakurova, A.N. Khuziahmetov and others. In the last quarter of the twentieth century (1978), the PRC government realized all the needs of the Chinese economy, its strengths and weaknesses, and came to the conclusion that the main engine of progress is the level of education of the state, the possibility of access to it by the population, the existence and implementation of international projects helping to improve the existing conditions for the development of the state. It is interesting that China pays special attention to the last component - the development of China's international relations in the field of education (that is, with international organizations and corporations, higher educational institutions, etc.). Therefore, in this paper we will focus on the process of internationalization of HE policy. Over the past decade, China has completely revised the principles based on which the course of internationalization is being pursued, which immediately led to an increase in the standard of living of the Chinese and the prestige of the state in the international arena. Therefore, the experience of the PRC is a field for research for its possibility of adoption. This is what makes this work relevant. The leading trend of this process is to determine the effectiveness and quality of management. It is important for heads of educational institutions to know the basic principles of state policy in the field of education: the humanistic nature of education; priority of human values, human life and health, free development of personality; connection with national, regional, cultural traditions; general accessibility of education within the state educational standard; the secular nature of the educational system; democratic state-public nature of education management; freedom of pluralism in education; the independence of state educational institutions from the ideological attitudes and decisions of parties, socio-political movements (Sun Li, 2011). At the heart of education management today are new principles: not to limit, but to direct, not to prohibit, but to help, not to command, but to lead. Therefore, today it is very important that all leaders are well aware that everything that the

educational institution itself can decide, it must decide. Management of the development of a new system can be effective only when the use of modern educational technologies, innovative methods of teaching and learning, the formation of appropriate organizational structures and forms, the development of new economic mechanisms for its financing, the development of organizational forms cannot be solved in isolation. The heads of educational institutions are entrusted with a very delicate function: to practically coordinate, link into a single whole the real contradictory forms of manifestation of the interests of the state, the teaching staff, individual employees, including their personal ones, and also be able to implement the ideas and discoveries of creative workers in educational activities. teachers, innovative educators and scientists.

## **2. Objectives**

(1) To investigate problems of educational institutes' discipline inspections and supervision system in normal universities in China

(2) To develop strategic guidelines of educational discipline inspections and supervision system for normal universities in China

## **3. Review of Literature**

### **3.1 Concepts/Theories/Related Research**

The highest state authorized structure - the Ministry of Education of China (MEC), which has become the successor of the State Commission on Education since 1998. Such an authority was created to unify and systematize the entire field of education, as well as to carry out healthy functioning and control over its subjects. The Ministry of Education of China is responsible for: Determination of political strategy, plans and reforms for the development of the system, creation of appropriate legislation and control over the implementation of the measures taken. Implementation of the principles of equality and universality of education for all persons. Collection, analysis of basic information, data, statistics on the effectiveness of the course. Setting standards for institutions at all levels, as well as for their staff, educational programs and curricula. Control over the funds received by institutions, their distribution. Carrying out a special policy for national minorities. Inclusion in the learning process of such aspects as ideology, moral and physical health, creativity, political education, national defense. Providing universities with recruitment plans for applicants, their numerical distribution by specialties and directions, and the proper level of entrance exams for applicants themselves; participation in the distribution of graduates by universities by jobs and the creation of conditions to facilitate the search for work or the organization of one's own business. Support for research, development and innovation, using them to improve the state system. The effects of school inspections and supervision on school improvement have been outlined. The provision of feedback about weaknesses, the assessment of these weak points as satisfactory and unsatisfactory, and the agreements between inspector and supervisors regarding school improvement appear to make a difference in promoting school improvement and development (Ehren & Visscher, 2008). However, differences exist between school inspection and supervision. Nwankwo in Olele (1995) presented some difference between inspection and supervision; however, they were modified by the authors to suit the purpose of this study. They are:

1. (a) The aim of inspection is to find reasons for closing, opening or retaining a school.  
 (b) The aim of supervision is to help teacher and students to carry out the teaching and learning process more effective and interesting
2. (a) School inspection is teacher and principal centered. The fundamental aim of inspection is to serve the purpose of witch hunting.  
 (b) Supervision is concerned with the general structure of the school system. It deals with anything from the school curriculum to the welfare of students and teachers.
3. (a) inspection rigidly stresses strict compliance to set down rules and regulations irrespective of peculiar local conditions, which may make some of the set rules and regulations not workable.  
 (b) Supervision looks at management variables such as plans, policies and programs. In conjunction with the other participants; supervisors work out mutually accepted formula for supervision after considering all prevailing conditions in the school and immediate environment.
4. (a) inspections are normally not thorough because they are usually directed at specific occasional problems, such as investigating cases of fraud.  
 (b) Supervision is usually well planned and it is not reserved for investigating occasional problem.
5. (a) Inspectors usually demand respect. They intimidate teachers, students and school heads.  
 (b) Supervisors earn respect by sharing expertise. They are considerate on matters they encounter during supervision.
6. (a) Inspection is usually conducted by a person who is regarded as jack of all trade.  
 (b) Supervision is usually teamwork that is characterized by division of labor. Expert advice is sort and obtained by teacher and students.
7. (a) Inspection reports are usually not written immediately after inspection.  
 (b) Supervision reports are usually discussed with the teachers and students.
8. (a) There is always lack of follow-up activities after inspection  
 (b) Follow-up activities normally commence at the earliest possible time

### 3.2 Conceptual Framework

Input	Process	Output
1. Problems of educational institutes' discipline inspections and supervision system in normal universities in China 2. Proposed strategic guidelines of educational discipline inspections and supervision system for normal universities in China	1. Investigating problems of educational institutes' discipline inspections and supervision system in normal universities in China 2. Developing strategic guidelines of educational discipline inspections and supervision system for normal universities in China	1. Data and information towards problems of educational institutes' discipline inspections and supervision system in normal universities in China 2. Strategic guidelines of educational discipline inspections and supervision system for normal universities in China

Figure 1: Conceptual Framework

## **4. Research methodology**

### **4.1 Population/Sample Groups**

Anshan Normal University was used as a case study. For the investigation of problems of educational institutes' discipline inspections and supervision system in normal universities in China, The population and sample groups were 110 teachers and educational administrators. Moreover, the 3 specialists were used for the focus group discussion meetings.

### **4.2 Research Instrument**

In this research, a questionnaire was employed for the data collection. The questionnaire was divided into 2 parts, 1) general information, 2) problems of educational institutes' discipline inspections and supervision system in normal universities in China. The questionnaire was evaluated for its validity through the Index of Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire were found in the IOC range of 0.66 to 1.00. In addition, its reliability was evaluated using the Cronbach's alpha coefficient and possessed the value of 0.81

### **4.3 Data Collection**

For the investigation of problems of educational institutes' discipline inspections and supervision system in normal universities in China, the researcher himself collected the data and information from the sample groups online via emailing. Moreover, the comments and suggestions for the development of the guidelines were collected from the 3 focus group discussion meetings.

### **4.4 Data Analysis**

For the investigation of problems of educational institutes' discipline inspections and supervision system in normal universities in China, the data were analyzed, interpreted and then presented in terms of frequencies, percentages, means ( $\bar{X}$ ), standard deviations (S.D.). The Five Point Likert Rating Scale was used to evaluate the level of problems of educational institutes' discipline inspections and supervision system in normal universities in China

## **5. Research Results**

5.1 Problems of educational institutes' discipline inspections and supervision system in normal universities in China

Table 1: Problems of educational institutes' discipline inspections and supervision system in normal universities in China

Items	n=110		Level of problems
	$\bar{X}$	S.D.	
1) You think that supervision for teachers in normal university causes lots of problems for learning systems.	4.69	0.20	Highest
2) You are not confident in supervision for teachers in normal university.	4.55	0.51	Highest
3) Your supervision for teachers in normal university equipment is difficult to use.	4.56	0.33	Highest
4) Supervision for teachers in normal university sometimes causes you to slow down your learning tasks.	4.64	0.57	Highest
5) Supervision are rich in resources and materials but difficult to connect.	4.41	0.47	High
6) The Supervision is sometimes hard to do.	4.58	0.28	Highest
7) Your computer is sometimes difficult wired with Supervision questionnaire.	4.65	0.21	Highest
8)The Supervision questionnaire feature sometimes creates difficulties for you to complete the questionnaire playback.	4.33	0.21	High
9) The supervision for teachers in normal university equipment usually sometimes works slowly due to poor connection.	4.58	0.48	Highest
10) Supervision for teachers in normal university sometimes makes students easy to cheat the test.	4.66	0.51	Highest
11) Supervision for teachers in normal university creates some limitations of interacting with teachers.	4.63	0.39	Highest
12) Supervision for teachers in normal university sometimes decreases students' interest in study.	4.42	0.33	High
13) Supervision for teachers in normal university often reduces your study time.	4.56	0.27	Highest
14) Supervision for teachers in normal university sometimes creates more difficulties for students to review the lesson.	4.61	0.37	Highest
15) Supervision for teachers in normal university sometimes creates more difficulties for students to consult their teachers.	4.31	0.42	High
16) Supervision for teachers in normal university resources are more abundant but hard to screen out the qualified teaching materials.	4.61	0.41	Highest
17) questionnaires are plenty but some are not effective.	4.65	0.20	Highest
18) questionnaires are usually more difficult to download or to save files.	4.48	0.37	High
19) You can watch a lot of online videos causing distractions from questionnaires.	4.59	0.31	Highest
20) Supervision for teachers in normal university sometimes makes it more difficult for students to finish homework.	4.56	0.42	Highest
Total	4.52	0.36	Highest

According to table 1, it is indicated that the teachers and educational administrators rated the problems of educational institutes' discipline inspections and supervision system in normal universities in China at the "Highest" level ( $\bar{X} = 4.53$ ,  $SD = 0.36$ ).

### 5.2 Strategic guidelines of educational discipline inspections and supervision system for normal universities in China

Table 2: The Evaluated Correctness and Suitability of the contents of the Strategic guidelines of educational discipline inspections and supervision system for normal universities in China in terms of IOC

Units	IOC
1) Purpose of educational discipline inspections and supervision system	1.00
2) Composition and main duties of educational discipline inspections and supervision group	0.66
3) Rules for the implementation of educational discipline inspections and supervision team	0.66
4) The main forms and methods of educational discipline inspections and supervision	1.00
5) Principles of dealing with the results of educational discipline inspections and supervision	1.00
6) The working system of educational discipline inspections and supervision	0.66

According to table 2, The developed strategic guidelines of educational discipline inspections and supervision system for normal universities in China composed of 6 units. The contents of all the 6 units were evaluated for its correctness and suitability in terms of IOC by the 3 specialists and possessed the IOC values ranging from 0.66 to 1.00.

## 6. Discussion of the Research Results

Over the past twenty years, China has made a huge leap in the level of development of the education system. Thanks to the competent and consistent policy in this area, the state managed to bring it out of the state of the deepest crisis after the Cultural Revolution in the shortest possible time, but more importantly, to bring it to a high level. Lacking centuries of experience in constantly reforming schools, at the moment, Chinese universities are confidently moving towards approaching the best universities in the world. The achievement of this goal was facilitated by the effective measures enshrined in the five-year development plans, which radically change the approach to education. From a state where students were nurtured only to support the leadership because of loyalty to the ideology of communism and did not satisfy real economic interests, when students dreamed of leaving the country for a better life, the PRC has turned into one of the most developed world centers in the field of technology, which only active scientific developments; in the center where students from all over the world aspire to go. The Ministry of Education of China, successfully diagnosing weaknesses, takes active decisions to immediately correct legislation, which allows timely elimination of emerging problems and not slowing down the pace of achievements. In addition, a key component is a different attitude of young Chinese towards the fact of getting an education. Due to the demographic factor, which implies a huge population of

China, young people are striving to put all their efforts into having the best education in quality, which will undoubtedly provide the highest competitiveness, and therefore higher wages. Therefore, every Chinese is determined to devote the maximum amount of time to study and welcomes new projects and opportunities with sympathy. It is also important to consider the active support of such aspirations by business. Entrepreneurs are the class that is interested in the real usefulness of the graduate. To do this, business also responds positively to the following changes, becoming an entity that finances various internships, projects, etc., which benefits both the student and the state, and himself. By 2050, China plans to become the most developed region filled with the latest innovations. Taking into account the successful experience of its past, it is safe to say that China is indeed capable of achieving its goal.

Thus, the functioning tandem of the government, students and entrepreneurs determines the success of China and provides a stable basis for further modernization of the key factor in the development of any state - education. Nevertheless, despite the significant achievements made by bringing the issue of educational policy to the international level, this process also entailed a lot of problems. First of all, internationalization in general leads to an increase in the dependence of states on each other and greater sensitivity to the changes that occur outside their own territories, which is reflected not so much at the university level as at the state level.

As a result of revisions and adaptations of curricula, academic disciplines that are truly important for a given specialty or for the state education system as a whole may be lost. This may lead to an ambiguous assessment of bilateral cooperation, since the acquired element may not compensate for forced concessions or losses; and this will be revealed only after a relatively long period of time has elapsed.

The next flip side of educational internationalization is the problem of "brain drain". States enter into a kind of race for leadership in this area, trying to get as many highly qualified specialists as possible, on the one hand, improving domestic legislation, but, on the other hand, widening the gap between the most and least successful reformer countries in this area.

Another significant problem was the growth of fraud: crimes related to the forgery of international diplomas and certificates are becoming more frequent, because the possession of such incredibly increases the competitiveness of a potential employee and the prestige of the company as a whole.

Thus, the internationalization of education is a completely new phenomenon for China in the 21st century, which is still at the initial stage of implementation in higher education policy. Pursuing the goal of the economic well-being of the nation, China joins the process of internationalization only in 1978. However, today this process is gaining momentum, which means that China is moving towards building a qualitatively new society and economy. This is just as obvious as the fact that the PRC will no longer be able to return to the "pre-internationalization" era, which means it will be forced to cope with all the new difficulties that the internationalization of education will inevitably present to the country.

## 7. Recommendations for Further Study

The effectiveness of the Strategic guidelines of educational discipline inspections and supervision system for normal universities in China should be executed.

## 8. Acknowledgement

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**Developing a Guideline Handbook for Mental Problems Management  
for Students in Vocational Colleges: A Case Study of Nanchang Vocational  
University in China**

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**ABSTRACT**

The objectives of this study are: 1) to investigate the psychological problems of vocational college students; 2) Investigate the needs of vocational college students with psychological problems; 3) Formulate a guidance manual for the management of psychological problems of vocational college students. The respondents in this study were divided into two groups; 387 students and 200 faculty/administrators were obtained through a hierarchical random sampling technique. Take Nanchang Vocational College as an example. The research tools used were: 1) a questionnaire, 20 questions, 5 grading scales, and 2) a set of questions in 3 focus group discussions. The collected information and data are analyzed and presented based on frequency counts, percentages, averages, and standard deviations. The development of the Guidance Manual for the Management of Psychological Problems in Vocational College Students consists of nine modules; 1) Mental health education courses 2) Cultivate students' positive psychological qualities 3) Adjust students' psychological problems 4) Student key problem database 5. Daily mental health early warning grid 6) Mental health education team construction 7) Psychological counseling and counseling 8) Guarantee of mental health education conditions 9) Self-intervention and crisis intervention in psychological crisis. All nine units are evaluated and approved by experts in terms of correctness and applicability of content, ending with IOC values from 66 to 1.0. This means

that the strategic approach is acceptable and can be used to evaluate the Nanchang Vocational College Student Psychological Problem Management Manual to improve the school's psychological problem solving measures.

**Keywords:** Guideline handbook, Mental problems management, Vocational colleges

## **1. Background**

With the development of higher education, vocational colleges have become an important part of universal education, and the students of vocational colleges have also become an increasingly large social special group, who not only have the common characteristics of ordinary college students, but also have personality due to the difference in training goals and social environment. Therefore, in recent years, with the reform of the education system and the changes in the social macro environment, problems such as school employment, family poverty, emotional problems, and interpersonal conflicts have inevitably brought a huge impact to the psychology of higher vocational students. It is understood that on today's college campuses, college students have emotional and emotional problems such as depression, anxiety, fear, low self-esteem, over-dependence, and neurasthenia.

Good psychological quality is an important part and important embodiment of personal comprehensive quality, and mental health education for the purpose of improving psychological quality should become an important content of higher vocational education. (Pan Chunli, 2011) believes that it is necessary to "establish mental health files for vocational students to record the trajectory of each student's psychological growth; mental health education in many forms; Strengthen teacher training and build a high-quality mental health education team; Establish a diversified social support network system for vocational students". However, due to the late start of vocational college education, rapid development, and even blind development, many unexpected situations and problems have appeared in the process of development, and if these problems cannot be solved, it will affect the sustainable development of higher vocational education.

## **2. Objectives**

- 1). To investigate the problems of psychological problems of vocational college students.
- 2). To investigate the needs of psychological problems of vocational college students.
- 3). To develop a guideline handbook for the management of psychological problems of vocational college students.

## **3. Review of Literature**

### **3.1 Concepts /Theories/ Related Research**

The physical, psychological and environmental environment of students is undergoing new changes, and if college students have difficulty adapting to these new changes, there will be varying degrees of psychological problems. Psychological problems are different from physical diseases, it is a series of problems caused by human psychological factors, it is precisely the central nervous system of the brain, which will

indirectly change people's personality, world view and emotions. It is a local abnormal state in normal psychological activities, there are no pathological changes in the psychological state, it has obvious episodic and temporary, often related to a certain situation, often induced by a certain situation, and the individual's psychological activity is completely normal from the situation.

(Guan Wei, 2014) pointed out that schools should attach importance to mental health education, actively carry out publicity and education activities, and help college students solve the problem that vocational colleges refer to all kinds of secondary vocational schools that implement full-time secondary education in accordance with the law and all kinds of secondary vocational schools that implement full-time higher education in accordance with the law approved by relevant government departments, including higher vocational (short-term) colleges, secondary technical schools, secondary vocational schools, etc. (Jiang Huixue, 2018) believes that the mental health standards of college students should be correct from three aspects: personality integrity, emotional stability, interpersonal harmony, and adaptation to social life, and puts forward the goals that college students' psychoeducational management and education administrators should achieve.

### 3.2 Conceptual Framework

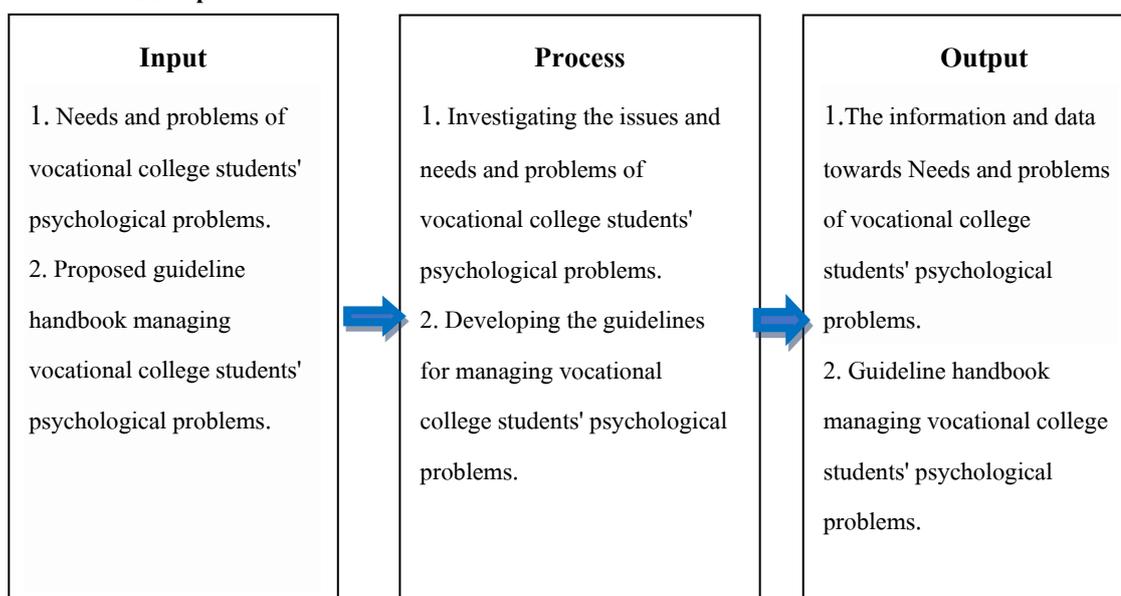


Figure 1 Conceptual Framework

## 4. Research methodology

### 4.1 Population/ samples

This study will be conducted as a case study at Nanchang Vocational University in Nanchang, Jiangxi Province, China. The population of this project will have 12,000 students and 400 teachers, administrators. The sample groups of this research project were divided into 2 groups; namely. 1) 387 students, involved in the management of psychological problems; 2) Nanchang Vocational University has 200 teachers involved in health education on students' psychological problems. The sample group according to Yamane (1973)' formula as:  $n = N / (1 + N(e)^2)$ , The respondents were collected through the random sampling technique.

#### 4.2 Research Instrument

1) Questionnaire: In this research project, a questionnaire will be employed for the data collection. The questionnaire will be divided 2 parts; namely, 1) general information, and 2) causes of psychological problems in students. The questionnaire will be evaluated for the Index of Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire will be in the range of IOC 0.66 to 1.00.

2) For the development of the strategic guidelines, the three focus group meetings were conducted to gain ideas and comments from the specialists. A set of questions for focus group this discussion meeting. The developed handbook will be evaluated by the three specialists (one Thai and two English native speakers), and the three specialists will be invited for three focus group discussion meetings to share ideas and give comments concerning the correctness and suitability of the handbook, the results then will be presented in terms of IOC (Index of Congruence).

#### 4.3 Data Collection

For this research project, the researchers themselves collected data and information from a sample group. The sample group was informed of the purpose of the data collection and made an appointment. The researchers submitted a permission letter to the school's principal in advance, asking for permission to collect data and information from the Nanchang Vocational University sample group. In addition, three focus groups were held to collect views, ideas and suggestions on the correctness and improvement of the Strategic Guidelines.

#### 4.4 Data Analysis

1) The Data and information collected will be analyzed, interpreted and then presented in terms of frequency court, percentage, mean ( $\bar{X}$ ), standard deviation (S.D.). The Likert Five-Point Scale will be used to assess respondents' needs and problems with the psychological problems of vocational college students.

2) The ideas and comments of the 3 specialists obtained from the focus group discussion meeting, will be analyzed and then used to correct and improve the contents of the handbook.

### 5. Research Results

#### 5.1 The problem of psychological problems of students in vocational colleges

##### 1) Psychological problems of students in vocational colleges for students

Table 1: Psychological problems of students in vocational colleges for students (Students)

Questions	n=387		Level of problems
	$\bar{X}$	S.D.	
1) You think you have a communication barrier in interpersonal communication.	4.55	0.28	Highest
2) Students don't play much attention on beneficial lifestyle.	4.58	0.30	Highest
3) You are encountering stresses and worries about your life and keep them in your mind.	4.55	0.31	Highest

4) You think that it is difficult to reach counseling and guidance provided by university.	4.64	0.25	Highest
5) You think that students' psychological problems are created by the environment they stay with.	4.64	0.27	Highest
6) You don't think the student mental health education curriculum needs to be conducted.	4.56	0.27	Highest
7) The school does not fully have information on students' psychological problems.	4.64	0.35	Highest
8) The school does not carry out relevant mental health education and teaching activities for students.	4.68	0.26	Highest
9) The school lacks experience in students' psychological counseling and learning.	4.63	0.25	Highest
10) Schools lack psychological crisis intervention programmes for students.	4.55	0.27	Highest
<b>Total</b>	<b>4.60</b>	<b>0.28</b>	<b>Highest</b>

According to the table, most students rated the school's failure to carry out relevant mental health education teaching activities for students as the highest level of average score ( $\bar{X}$ ) 4.60 (S.D. = 0.28).

## 2) Problems of teachers in vocational colleges in students' mental health education(teachers)

Table 2: Problems of teachers in vocational colleges in students' mental health education

Questions	n=200		Level of problems
	$\bar{X}$	S.D.	
1) You think a lot of students have mental health issues.	4.59	0.29	Highest
2) You think that students' mental health education causes psychological disorders in students.	4.59	0.27	Highest
3) Students have difficulty communicating in interpersonal communication.	4.55	0.28	Highest
4) You think students are experiencing stress and worry about life and take them to heart.	4.55	0.31	Highest
5) You think it is difficult for students to receive counseling and educational supervision.	4.64	0.25	Highest
6) You think there are various problems with mental health education for students.	4.64	0.29	Highest
7) You don't think the university has enough staff for counseling and guidance on mental health education.	4.64	0.27	Highest

8) No special funds have been set up for mental health education.	4.56	0.35	Highest
9) Schools do not regularly carry out relevant mental health education activities.	4.64	0.26	Highest
20) Teachers lack experience in mental health education for students.	4.66	0.25	Highest
<b>Total</b>	<b>4.61</b>	<b>0.29</b>	<b>Highest</b>

According to the table, Most teachers and administrators rate teachers' inexperience in student mental health education as an average ( $\bar{X}$ ) of 4.61 (S.D.=0.29).

## 5.2: Need for skills to solve psychological problems among vocational college students.

### 1) Need for skills to solve psychological problems among vocational college students

Table 3: Need for skills to solve psychological problems among vocational college students (students)

Questions	n=387		Level of needs
	$\bar{X}$	S.D.	
1) You think schools need to learn mental health education courses.	4.68	0.31	Highest
2) You think most people need to be concerned about psychological issues.	4.59	0.33	Highest
3) You are communicative in your interpersonal relationships.	4.65	0.34	Highest
4) You think it's easy to accept counseling supervision.	4.61	0.32	Highest
5) Teachers need to pay attention to students' psychological problems.	4.65	0.32	Highest
16) Mental health education courses for students are necessary.	4.62	0.27	Highest
7) You think that students' psychological problems need to be managed in a grid.	4.62	0.27	Highest
8) Schools regularly carry out mental health education and teaching activities.	4.64	0.33	Highest
9) The school is doing a good job in psychological counseling learning.	4.62	0.25	Highest
10) The school has a psychological crisis intervention program for students.	4.66	0.27	Highest
<b>Total</b>	<b>4.63</b>	<b>0.30</b>	<b>Highest</b>

According to the table, according to which most students rated the need for mental health education courses as the highest on average ( $\bar{X}$ ) of 4.63 (S.D. = 0.30).

**2) Need for Find out effective solutions for the psychoeducational management of students by teachers in vocational colleges**

Table 4: Need for Find out effective solutions for the psychoeducational management of students by teachers in vocational colleges.(teachers)

Questions	n=200		Level of needs
	$\bar{X}$	S.D.	
1) You think student mental health issues needs attention.	4.55	0.29	Highest
2) You think that students' psychological problems need to be solved.	4.68	0.32	Highest
3) You think most teachers and students are concerned about psychological issues.	4.62	0.25	Highest
4) Students are communicative in their interpersonal relationships.	4.59	0.32	Highest
5) Students are expected to focus on a rewarding lifestyle.	4.65	0.31	Highest
6) You think it's easy for students to adjust to university life.	4.62	0.28	Highest
7) You think that solving students' psychological problems is good for the development of society.	4.61	0.32	Highest
8) you think students should actively participate in social welfare activities in mental health education.	4.65	0.27	Highest
9) Schools regularly carry out mental health education activities.	4.64	0.30	Highest
10) It is necessary to establish a correct concept of mental health education.	4.66	0.35	Highest
<b>Total</b>	<b>4.63</b>	<b>0.30</b>	<b>Highest</b>

According to the table, most teachers and administrators rated student mental health education as the highest on average of ( $\bar{X}$ ) 4.63 (S.D. = 0.30).

**5.3: Guidance handbook manual for the management of psychological problems of vocational college students.**

It becomes the nine units of the "Guidance Manual for the Management of Psychological Problems for Students in Vocational Colleges", namely: 1) mental health education courses 2) cultivating students' positive psychological qualities 3) adjustment of students' psychological problems 4) student key problem database 5.

daily mental health early warning grid 6 Mental health education team building 7) Psychological counseling and counseling 8) Mental health education conditions guarantee 9) Psychology Crisis self-intervention and crisis intervention. Nine units were evaluated based on the correctness and applicability of the content and expressed in IOC (Conformance Index) values. All 9 units are assessed with an IOC value between 0.66 and 1.0, which means that it is acceptable to develop a manual for the management of psychological problems for vocational college students, which can be used as a psychological management manual for students of Nanchang Vocational University to improve their psychological problem skills and abilities.

## **6. Discussion of the Research Results**

In this survey, 387 students and 200 teachers and administrators were sampled (50.5% female and 49.5% male). Among the students, 152 (39.28%) were girls and 235 (60.72%) were boys. After the survey, it can be seen that most students and teachers believe that the needs and problems of student psychological problem management are very important. Tang Liping and He Yuanming (2018) investigated the impact of staying up late on the mental health of college students, and the results showed that staying up late can lead to anxiety, more severe loneliness and depression, confusion and sometimes even mild mental disorders. Lu Wei et al. (2017) showed through a survey that college students who live with their parents and have good family education methods have a higher mental health level than intergenerational upbringing, especially mothers have an important impact on the physical and mental health of their children. Jiang Huixue (2018) believes that the mental health standards of college students should be correct in three views, personality integrity, emotional stability, harmonious interpersonal relationships and adaptation to social life, which puts forward the goals to be achieved by the management of college students' psychological education. Jiang Caihong (2017) argues that improving the mental health of college students can be achieved through sports. Hong Yan (2018) proposed that the management of college students' mental health should be scientific and systematic, and the system platform under the background of big data should be used to store and deeply analyze the collected information, so as to seek methods with guiding significance for college students' mental health management.

Most of the research on the management of college students' psychological problems stays in the research of mental health education, which is microscopic and shallow, and lacks macroscopic and systematic research; at the same time, relevant research focuses on the research on the current situation, problems and formation factors of college students' mental health It is necessary to cultivate college students' self-confidence and motivate; and integrate information with the help of software platforms under the background of big data; and formulate a manual for the management of psychological problems in vocational colleges.

## **7. Recommendation for Further Study**

1) Further improve the content of the questionnaire to better understand the current situation of psychological problems of college students, the relevant management status of schools and related causes, so as to make the survey results more effective and practical.

2) The management of psychological problems of college students studied in this paper has certain limitations, which are manifested in the limited scope and depth of research; its management is infinite, not only to manage students with mental health problems, but also to manage all college students.

## 8. Acknowledgement

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## **Developing Guidelines for the Evaluation of Working Performance of Teachers in Kindergarten: A Case Study of Changchunteng Kindergarten, China**

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### **ABSTRACT**

The objectives of this research were: 1) to investigate problems of the evaluation of working performance of teachers in kindergarten, 2) to investigate needs of guidelines for the evaluation of working performance of teachers in kindergarten, and 3) to construct guidelines for the evaluation of working performance of teachers in kindergarten. In this study, Changchunteng Kindergarten in China was used as a case study. For the investigation of problems of the evaluation of working performance of teachers in kindergarten and needs of guidelines for the evaluation of working performance of teachers in kindergarten, the population and sample group was 150 teachers and school administrators. Moreover, the 3 specialists were used for the focus group discussion meeting. For the investigation of the needs and the problems, the research instrument was a questionnaire. The questionnaire was evaluated for its validity through the IOC ranging from 0.66 to 1.00. In addition, its reliability was evaluated using Cronbach's Alpha Coefficient and possessed the value 0.81. For the focus group discussion meeting, a set of questions were used. The collected data were analyzed through the content analysis method and presented in terms of frequencies, means, standard deviations. The Likert rating scales were used to rate the degree or level of the problems and the needs. The findings indicated that problems of the evaluation of working performance of teachers in kindergarten and needs of guidelines for the evaluation of working performance of teachers in kindergarten were both rated in the "highest" level. The constructed

guidelines for the evaluation of working performance of teachers in kindergarten comprised of 5 units; namely, 1) Daily code of conduct and guideline for teachers in kindergarten, 2) Leave and attendance system for teachers in kindergarten, 3) Punishment for disciplinary violations for teachers in kindergarten, 4) The performance of teachers in kindergarten should be based on the principle of "efficiency first, stability and fairness", and 5) Performance evaluation for teachers in kindergarten. All of the five units were evaluated and approved by the specialists in terms of correctness and suitability of the contents and presented in terms the IOC values ranging from 0.66 to 1.0. This means the constructed guidelines for the evaluation of working performance of teachers in kindergarten was acceptable and could be used for the evaluation of working performance of teachers in kindergarten at Changchunteng Kindergarten in China for the enhancement of working performance of teachers in kindergarten.

**Keywords:** Guidelines, Evaluation of Working Performance, Teachers in Kindergarten

## 1. Background

It can be seen that colleges and universities occupy an important position in the development of China's market economy. To make students scale expansion not affect the quality of education, the ordinary colleges and universities, through silver, loans, financial subsidies, land replacement, attract social forces to participate in school investment, raise funds for the construction of new campus, speed up the improvement of educational conditions, realize the leapfrog development of higher education. At the same time, there are also problems such as insufficient understanding of financial risks of universities and the increasing debt scale of universities, and even some universities have appeared the risk of large debt scale. Chinese universities should try to establish an effective on campus resource allocation system. As the backbone of university work, the decision of teaching, scientific research and discipline construction must first establish the cost awareness. In University management, researchers must adhere to the bottom line of cost, adhere to the principle of "acting within one's ability, living within one's means, thrift, increase revenue and reduce expenditure, do something and not do something", and implement a prudent and tight fiscal policy. In current financial conditions, Universities have to be more careful than before. As the core tool of university resource and personnel allocation, it is also necessary to establish the cost awareness and efficiency concept. In the case of increasingly tight college education funds, the salary and income of college employees, especially teachers, is "all the way red", step by step. At the beginning of the reform and opening up, the average salary level of teachers has been hovering from the last place to the third place among the 12 industries of the national economy. Since the reform and opening up, the Party and the state have gradually paid attention to the investment in education, and carried out several systematic reforms of the salary system in colleges and universities. The overall effect is that teachers' salary income is increasing. In the 20 years the average annual salary of college teachers increased by 17.8 times, the average annual salary of college teachers exceeded 23,300 yuan, an increase of 2,261 yuan over 2002 and nearly 22,100 yuan over 1985, Including non-institutional compensation and market-based employment, this figure should be even higher. Nowadays, college

teaching has become one of the most attractive professions. according to the regulations of the State Administration of Taxation, China is currently in high income. (Zhao, Yuanke. 2020).

## 2. Objectives

- 1) To investigate problems of the evaluation of working performance of teachers in kindergarten
- 2) To investigate needs of guidelines for the evaluation of working performance of teachers in kindergarten
- 3) To construct guidelines for the evaluation of working performance of teachers in kindergarten

## 3. Review of Literature

### 3.1 Concepts/Theories/Related Research

Taylor, D. (2015). *Performance*. Duke University Press. The meaning of performance. Performance has two dimensions, organizational performance and individual employee performance. for performance at the individual employee level, there are two main views. one sees performance as an outcome, and outcome performance can be expressed by words such as output, target, task, goal, etc. The other sees performance as an individual behavior. Bernardin, drawing on the results of previous studies, defines performance as the record of output produced by a specific job function or activity at a specific time. Taken together, individual employee performance should be a combination of process and outcome ratings. For the organization, performance is the completion of work tasks in terms of quantity, quality and efficiency. The level of employee performance directly affects the completion of the organization's overall goals. Therefore, understanding the characteristics of performance and the factors affecting performance is of great significance to improve employee performance. Zhao, J., & Burke, A. F. (2021). Review on super capacitors: Technologies and performance evaluation. *Journal of working performance*, 59, 276-291. Performance evaluation refers to the use of certain evaluation methods, quantitative indicators and evaluation criteria to conduct a comprehensive evaluation of the implementation results of a certain performance target. At present, performance evaluation is a general trend of international higher education evaluation, and the importance and urgency of enriching the evaluation system of Chinese colleges and universities are increasingly prominent. In the new historical period, the performance evaluation of colleges and universities is of great practical significance to continuously improve the internal management, improve the efficiency of running schools and the efficiency of the use of public funds. In order to encourage colleges and universities to make effective use of educational resources and improve the quality of teaching, the Outline of the National Medium- and Long-term Education Reform and Development Plan 2010-2020 requires colleges and universities to introduce competition mechanism, implement performance evaluation and carry out dynamic management. The report to the 19th National Congress of the CPC proposed establishing a comprehensive, standardized and transparent budget system with scientific standards and strong constraints, and implemented performance-based management across the board. At present, the connotation of performance

evaluation in colleges and universities is constantly enriched, the methods are increasingly diversified, and the functions are constantly expanded, and the distinctive evaluation ideas or systems are gradually formed.

### 3.2 Conceptual Framework

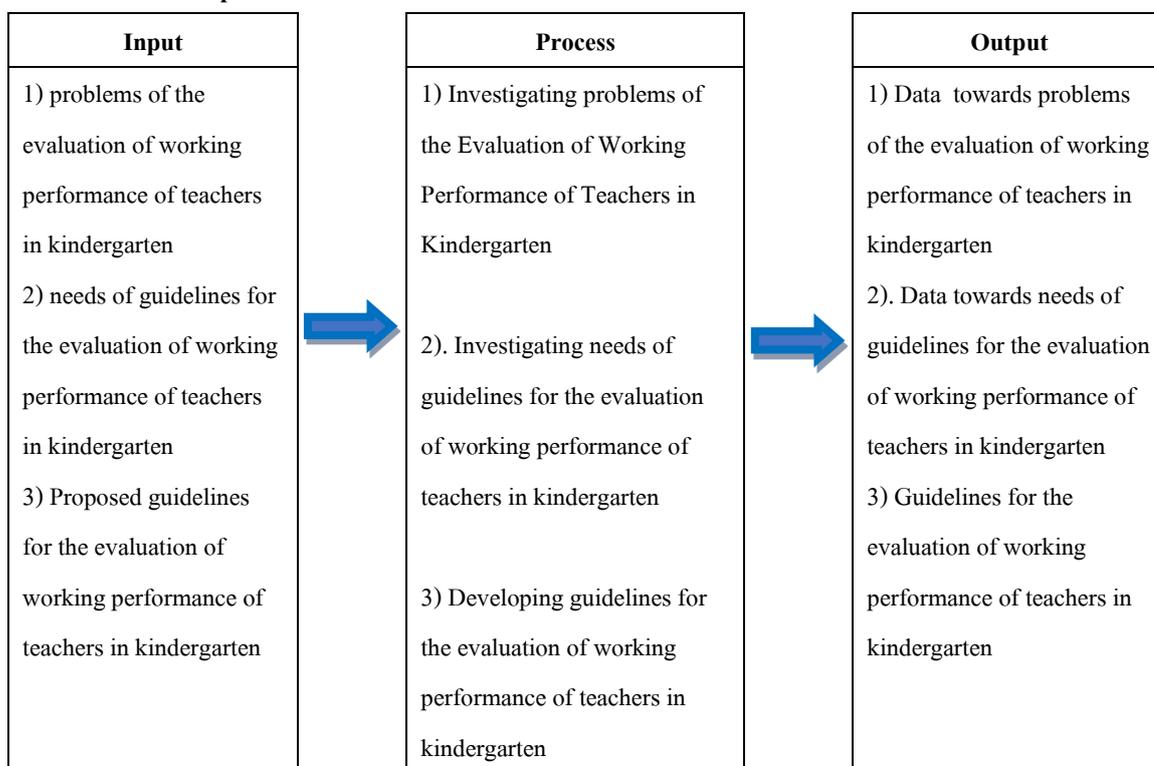


Figure 1 Conceptual Framework

## 4. Research methodology

### 4.1 Population/Sample groups

In this research, Changchunteng Kindergarten in China was used as a case study. The population and samples were 150 teachers and school administrators. For the improvement and correctness of the constructed guidelines, the samples were 3 specialists.

### 4.2 Research Instruments

1) Questionnaires: In this research project, a questionnaire was employed for the data collection. The questionnaire was divided 3 parts; namely, 1) General Information, 2) problems of the Evaluation of Working Performance of Teachers in Kindergarten, 3) needs of guidelines for the Evaluation of Working Performance of Teachers in Kindergarten. The questionnaire was evaluated for its validity by the Index of Congruence (IOC) by three specialists. Each question in the questionnaire was in the range of IOC 0.66 to 1.00. In addition, the questionnaire was evaluated for its reliability by the Alpha Cronbach Coefficient with the value of 0.81.

2) A set of questions for the focus group discussion meeting: to construct guidelines for the evaluation of working performance of teachers in kindergarten, a set of questions for the focus group discussion meeting. 3 specialists were invited to participate in the 3 focus group discussion meetings to recruit ideas, suggestions and comments for the correctness and suitability of the guidelines for the evaluation of working

performance of teachers in kindergarten. The correctness and suitability of the strategic guidelines were evaluated in terms of IOC at the range of 0.66 to 1.0.

#### 4.3 Data collection

For the investigation of the problems of the—evaluation of working performance of teachers in kindergarten and needs of guidelines for the evaluation of working performance of teachers in kindergarten, the researcher herself collected the data from the sample groups online via email. Moreover, the three focus group discussion meetings were conducted to recruit the comments, ideas and suggestions for the correctness and improvement of the strategic guidelines via online meeting.

#### 4.4 Data Analysis

1) For the investigation of the problems and the needs, the collected data were analyzed, interpreted and then presented in terms of frequencies, percentages, means, standard deviations (S.D.). The Five Point Likert Rating Scale were used to evaluate the level or degree of the respondents' needs and problems.

2) For the correctness and improvement of the guidelines, the ideas, suggestions and comments from 3 specialists obtained from the 3 focus group discussion meetings, were analyzed and then used to correct and improve the contents of the guidelines.

### 5. Research Results

#### 5.1 Problems of the Evaluation of Working Performance of Teachers in Kindergarten

Table 1: Problems of the Evaluation of Working Performance of Teachers in Kindergarten

Items	N=150		Level of Problems
	$\bar{X}$	S.D.	
1) You think of less stability of your teaching job	4.42	0.32	High
2) You are not satisfied with your working performance	4.51	0.21	Highest
3) You are not satisfied with your working environment/atmosphere	4.52	0.33	Highest
4) You are not satisfied with the improvement of your teaching ability	4.56	0.33	Highest
5) You are not satisfied with your existing wage	4.51	0.25	Highest
6) You are not satisfied with the level of salary of teaching job	4.51	0.27	Highest
7) You are not satisfied with the rate of the salary increase of teaching job	4.42	0.21	High
8) You are not satisfied with the latest results of your working performance	4.33	0.26	High
9) You are not satisfied the existing working performance evaluation process of the school	4.52	0.31	Highest
10) You are not satisfied with the organization of your school	4.56	0.27	Highest
Total	4.51	0.33	Highest

According to table 1, it is indicated that most of teachers and administrators rated problems of the evaluation of working performance of teachers in kindergarten at the “highest” level ( $\bar{X} = 4.51$ , S.D.=0.33). Moreover, most of the 10 questions were rated in the highest level.

### 5.2 Needs of guidelines for the Evaluation of Working Performance of Teachers in Kindergarten

Table 2: Needs of guidelines for the Evaluation of Working Performance of Teachers in Kindergarten

Items	N=150		Level of Needs
	$\bar{X}$	S.D.	
1) You need hing stability of your teaching job	4.52	0.32	Highest
2) You need to enhance your working performance	4.51	0.21	Highest
3) You need better working environment/atmosphere	4.52	0.33	Highest
4) You need the improvement of your teaching ability	4.56	0.33	Highest
5) You need reasonable wage	4.51	0.25	Highest
6) You need the school to increase level of salary of teaching job	4.51	0.27	Highest
7) You need the school to revise the rate of the salary of teaching job	4.55	0.21	Highest
8) You need the school to recheck the results of your working performance	4.54	0.26	Highest
9) You need the school to reset the working performance evaluation process	4.52	0.31	Highest
10) You need the school to reset the organization	4.56	0.27	Highest
Total	4.53	0.33	Highest

According to table 21, it is indicated that most of teachers and administrators rated needs of guidelines for the evaluation of working performance of teachers in kindergarten at the “highest” level ( $\bar{X} = 4.53$ , S.D.=0.33). Moreover, all of the 10 items were rated in the highest level.

### 5.3 Proposed guidelines for the Evaluation of Working Performance of Teachers in Kindergarten

Table 3: The Index of Congruence (IOC) in terms of correctness and suitability of the contents of the five units of guidelines for the evaluation of working performance of teachers in kindergarten

Units	IOC
1) Daily code of conduct and guideline for teachers in kindergarten	0.66
2) Leave and attendance system for teachers in kindergarten	
3) Punishment for disciplinary violations for teachers in kindergarten	
4) The performance of teachers in kindergarten should be based on the principle of "efficiency first, stability and fairness"	
5) Performance evaluation for teachers in kindergarten	

According to table 3, it is indicated that the contents of the 5 units of the guidelines for the evaluation of working performance of teachers in kindergarten in terms of correctness and appropriateness with the IOC (Index of Consistency) in the range from 0.66 to 1.0. it can be assumed that the constructed guidelines for the evaluation of working performance of teachers in kindergarten were acceptable for being used for the evaluation of working performance of the Teachers at Changchunteng Kindergarten in China.

## **6. Discussion of the Research Results**

According to the results from this study, it can be concluded that most of teachers and administrators rated problems of the evaluation of working performance of teachers in kindergarten at the “highest” level ( $\bar{X} = 4.51$ , S.D.=0.33). Moreover, most of the 10 questions were rated in the highest level. Similarly, most of teachers and administrators rated needs of guidelines for the evaluation of working Pperformance of teachers in kindergarten at the “highest” level ( $\bar{X} = 4.53$ , S.D.=0.33). Moreover, all of the 10 items were rated in the highest level. In addition, the contents of the 5 units of the guidelines for the evaluation of working performance of teachers in kindergarten in terms of correctness and appropriateness with the IOC (Index of Consistency) in the range from 0.66 to 1.0. it can be assumed that the constructed guidelines for the evaluation of working performance of teachers in kindergarten were acceptable for being used for the evaluation of working performance of the teachers at Changchunteng Kindergarten in China. At present, China's colleges and universities are institutions funded by the government. There are similarities between the administrative departments and state organs in the performance system. In order to improve the efficiency of administrative department personnel and give full play to the incentive role of salary, it is necessary to find the most appropriate performance evaluation index on the basis of learning from the reform experience and development trend of improving the performance system of the balanced scorecard according to the school situation. Drawing on the basic idea of balanced scorecard, combining with the actual situation of administrative departments of Chinese universities, the overall performance evaluation index of administrative departments are divided into three aspects: students (teachers), internal organization, learning and growth, and the performance evaluation indicators of university administrative personnel are designed.

## **7. Recommendations for Further Study**

The evaluation of the effectiveness of the guidelines for the evaluation of working performance of teachers in kindergarten needs to be executed.

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**Developing Strategic Guidance to Assist Job Hunting for New Graduates:  
A Case Study of Shan Dong De Chou University**

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**ABSTRACT**

The objectives of this research were: 1) To investigate needs of Strategic Guidance to Assist Job Hunting for New Graduates, and 2) To develop strategic guidance to assist Job Hunting for New Graduates. In this research, Shan Dong De Chou University was used as a case study. The populations were divided into 2 groups; namely, 1) 4,000 students and 2) 100 teachers and administrators. The sample groups were divided into 2 groups; namely, 1) 363 students (Yamane, 1973) and 2) 100 teachers and administrators. The respondents were obtained through the stratified random sampling technique. Moreover, a set of questions were used for the focus group discussion meetings. The information and data collected were analyzed through the content analysis and presented in terms of frequency count, percentage, mean, and standard deviation. The findings indicated that: 1) most of students and teachers/administrators rated needs of Strategic Guidance to Assist Job Hunting for New Graduates at the "Highest" level. The strategic guidance to assist to Assist Job Hunting for New Graduates composes of 4 units; All four units were evaluated and possessed the IOC values from 0.67 to 1.0 meaning the developed strategic guidance to assist to Assist Job Hunting for New Graduates was acceptable and could be used as guidance to assist to Assist Job Hunting for New Graduates at Shan Dong De Chou University to enhance the job hunting skills and competence of the new graduates.

**Keywords:** Strategic Guidance, job hunting, new graduates

## **1. Background**

In recent years, the social economy has been developing and upgrading, and the industrial structure has been continuously adjusted, and China's economic development has also shifted from high-speed development to high-quality development and the outbreak of the New Crown Pneumonia epidemic in 2020 and the resulting rise in trade protectionism, world economic downturn, and shrinking global markets have already disrupted the rhythm of economic globalization. Although China carried out rapid and effective prevention and control of the epidemic and took the lead in resuming production and work, it is difficult for a country's economy to survive on its own.

The Fifth Plenary Session of the 19th CPC Central Committee emphasized the need to strengthen the policy of giving priority to job hunting and to further improve the construction of the job hunting support system, in which the job hunting of college graduates group was put in the first place. However, the number of college graduates is increasing year by year, and the number of college graduates in the class of 2022 will reach a new high, and the job hunting situation will become more complicated and severe. In order to implement the decision of the CPC Central Committee and the State Council to "stabilize job hunting" and "maintain job hunting", the Ministry of Education has decided to implement the "Job hunting and Entrepreneurship Promotion Action for the 2022 National College Graduates", which points out that the job hunting support for college graduates should be further improved and the job hunting of college graduates should be promoted.

The Ministry of Education has decided to implement the "2022 National Action to Promote the Job hunting and Entrepreneurship of Ordinary College Graduates", pointing out that it is necessary to further improve the job hunting support system for college graduates, and to make every effort to promote the job hunting of college graduates in a fuller and higher quality. As an important place for educating and training young talents, colleges and universities should grasp the important link of transforming young talents from individuals into social beings and optimize their career guidance system (the State Council, 2021).

## **2. Objectives**

- 1) To investigate needs of Strategic Guidance to Assist Job Hunting for New Graduates, and
- 2) To develop strategic guidance to assist Job Hunting for New Graduates

## **3. Review of Literature**

### **3.1 Concepts/Theories/related/research**

"Job hunting guidance" is synonymous with the concepts of "career guidance", "job-seeking counseling" and "career guidance", although the specific titles are different, their connotations and substance are basically the same. Although the specific title is different, its connotation and substance are basically the same. Comprehensive view of the existing relevant literature in China.

job hunting guidance is divided into broad and narrow sense, which is defined in the Dictionary of Education as "job hunting guidance in the narrow sense refers to the guidance from schools and social institutions; job hunting guidance in the broad sense refers to the comprehensive guidance and counseling activities based on the social demand for job hunting, collection and release of job hunting information, cultivation of job-seekers' job hunting ability, as well as recommending and organizing the job hunting-related activities".

Comprehensive guidance and counseling activities"(Gu,1998). The Job hunting Guidance for College Students, edited by the National Center for Job hunting Guidance for Graduates of Higher Educational Institutions, points out that "Job hunting guidance in the narrow sense refers to recommending occupational positions for job-seekers in accordance with their job hunting needs and helping them to realize their job hunting; job hunting guidance in the broader sense refers to providing job-seekers with guidance and services related to knowledge, experience and skills in preparation for their job hunting, and assisting them in their choice of occupation and job hunting"(Ministry of Education,1998).

The definition of career guidance in the related literature generally adopts the broad definition of career guidance by the National Center Group for Career Guidance of Higher Education Graduates. Therefore, summarizing the relevant definitions, this study defines job hunting guidance as: the coordination of the relevant subjects of job hunting guidance to help job seekers determine the direction of job hunting and career planning, and to promote the realization of effective job hunting through the guidance of knowledge, experience and skills.

### 3.2 Conceptual Framework

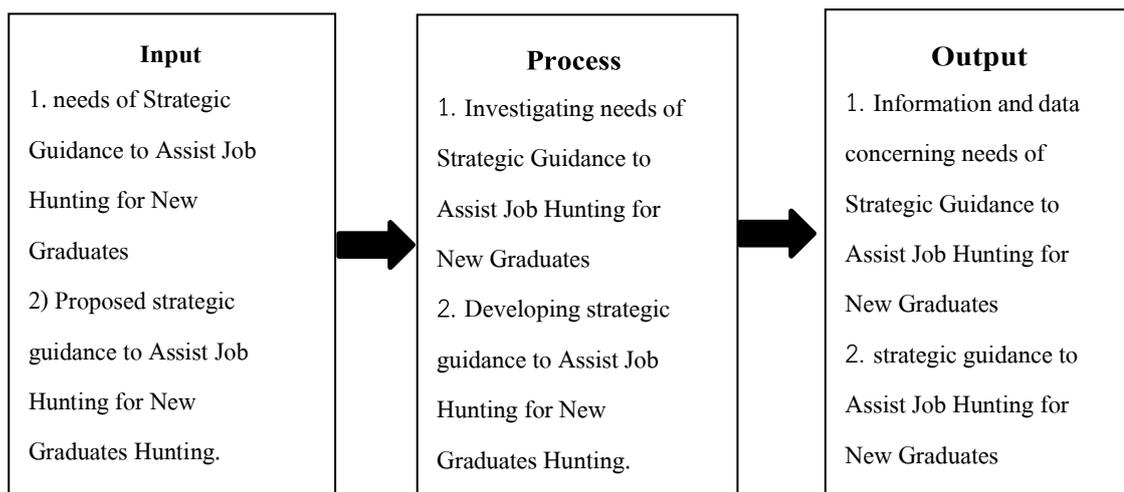


Figure 1 Conceptual Framework

## 4. Reserch Methodology

### 4.1 Population /Sample Groups

In this research, Shan Dong De Chou University was used as a case study. The population in this research project were divided into 2 groups; namely, 1) 4,000 students and 2) 100 teachers and administrators.

For the investigation of needs of Strategic Guidance to Assist Job Hunting for New Graduates, the sample groups were divided into 2 groups; namely, 1) 363 students (Yamane, 1973 and 2) 100 teachers and administrators. The respondents were obtained through the stratified random sampling technique. Moreover, the 3 specialists were used as samples for the focus group discussion meetings.

#### 4.2 Research Instrument

For the investigation of needs of Strategic Guidance to Assist Job Hunting for New Graduates, a questionnaire was employed to collect data and information from the sample groups online via emailing. The questionnaire was evaluated for its validity through IOC and possessed the range of 0.67 to 1.00. For its reliability, the Cronbach's Alpha Coefficient was used and possessed the value of 0.83. Moreover, a set of questions were used for the focus group discussion meetings.

#### 4.3 Data collection

For the investigation of needs of Strategic Guidance to Assist Job Hunting for New Graduates, a questionnaire was employed to collect data and information from the sample groups online via emailing. Moreover, a set of questions were used for the focus group discussion meetings to gather ideas and comments for the correctness and suitability of the strategic guidance to assist Job Hunting for New Graduates

#### 4.4 Data Analysis

The Data and information collected were analyzed, interpreted and then presented in terms of frequency count, mean ( $\bar{X}$ ), standard deviation (S.D.). The Five Point Likert Rating Scale was used to evaluate the level respondents' needs of Strategic Guidance to Assist Job Hunting for New Graduates. In addition, the correctness and suitability of the contents of Strategic Guidance to Assist Job Hunting for New Graduates were evaluated and presented in terms of IOC.

### 5. Research Results

#### 5.1 Needs of Strategic Guidance to Assist Job Hunting for New Graduates

Table 1: Needs of Strategic Guidance to Assist Job Hunting for New Graduates

Questions	n=363 (students)		n=100 (teachers/ administrators)		Level of needs
	$\bar{X}_1$	S.D.	$\bar{X}_2$	S.D.	
	1) Career plans for new graduate are required.	4.50	0.21	4.50	
2) Students need clear and reasonable employment plans while they are studying in school.	4.58	0.29	4.53	0.51	Highest
3) For future job considerations, students need to think about development prospects.	4.50	0.38	4.58	0.32	Highest

4) Students are required to arrange for professional supervision by the company during the internship period.	4.56	0.39	4.59	0.21	Highest
5) The attitude of the company during the student's internship is important for the student's employment.	4.51	0.50	4.51	0.35	Highest
6) Schools need to provide career guidance that students are satisfied with.	4.53	0.39	4.52	0.23	Highest
7) Schools need to conduct employment policy interpretation and awareness campaign.	4.61	0.36	4.56	0.29	Highest
8) Students are required to participate in diverse employment activities.	4.52	0.40	4.59	0.32	Highest
9) In the classroom teachers need to provide individualized career guidance.	4.65	0.41	4.62	0.21	Highest
10) Students' job readiness, initiative and motivation are important for employment.	4.55	0.5	4.58	0.24	Highest
11) There is a need for professional career guidance in the job search process.	4.59	0.32	4.51	0.45	Highest
12) Many of the tips in the career guidance class are important.	4.62	0.38	4.57	0.36	Highest
13) The case study approach to career guidance can be very helpful to students in getting a job.	4.58	0.29	4.60	0.26	Highest
<b>Total</b>	<b>4.53</b>	<b>0.37</b>	4.56	0.31	Highest

According to table1, it can be indicated that most of the teachers/administrators rated the Needs of Strategic Guidance to Assist Job Hunting for New Graduates at the “highest” level ( $\bar{X}$  = 4.56, S.D. = 0.31); in the same way, most students also rated the Needs of Strategic Guidance to Assist Job Hunting for New Graduates at the “highest” level ( $\bar{X}$ = 4.53, S.D. =0.37)

## 5.2 Strategic Guidance to Assist Job Hunting for New Graduates

Table 2: The Index of Congruence (IOC) of the four units of the Strategic Guidance to Assist Job Hunting for New Graduates in terms of correctness and suitability of the contents

Topics/Contents	IOC
<b>Unit1: Careful preparation</b>	
1.1 Widely collect employment information and familiarize yourself with employment channels	0.67
1.2 Prepare complete personal and job information	1.00
1.3 Adequate psychological preparation	0.67
<b>Unit2: Actively publicize and recommend yourself</b>	1.00
<b>Unit3: Master the basic skills of interview</b>	
3.1 to fully understand the role of the interview	0.67
3.2 do a good job preparing for the interview	0.67
3.3 pay attention to the establishment of the first impression	0.67
<b>Unit 4: Successful job search steps</b>	
4.1 Do a good job of preliminary career planning	0.67
4.2 Establish a job-seeking resource base	1.00
4.3 Prepare job search tools	0.67
4.4 Begin job search behavior	0.67

According to table 2, all the four units were evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.67 to 1.00.

## 6. Discussion of the Research Results

### 6.1 Needs of Strategic Guidance to Assist Job Hunting for New Graduates

According to the findings, it can be indicated that most of the teachers/administrators rated the Needs of Strategic Guidance to Assist Job Hunting for New Graduates at the “highest” level ( $\bar{X} = 4.56$ , S.D. = 0.31); in the same way, most students also rated the Needs of Strategic

Guidance to Assist Job Hunting for New Graduates at the “highest” level ( $\bar{X} = 4.53$ , S.D. = 0.37). For students, students are not prepared for employment, employment enthusiasm is not high, for their future career development does not have a clear plan, and many people even still think that there is no need for clear career planning, just let nature take its course. However, the current employment situation is becoming increasingly severe, the number of college graduates year after year a record high, the market demand for talent is also in the midst of increasing

changes, just hold the attitude of waiting is difficult to successfully realize high-quality employment. For teachers, there is a lack of precision in career guidance, a lack of attention to career guidance team building and a lack of systematic career guidance work. The concept of employment guidance is single. it is correspondent with Dongcheng Peng; Tieshan Li; Yang Wang; C. L. Philip Chen(2018) the findings include that In recent years, with the increasing development of Artificial Intelligence, Big Data and Cloud computing, etc., the information on the Internet has been booming, so how to obtain target information efficiently and quickly has become an urgent problem to be solved. This article aims at the data collection and acquisition problem of shipping job hunting information under the network environment. In this study, two kinds of information collection methods for shipping job hunting based on web crawler are proposed. Based on the Python standard libraries and Scrapy crawl framework, corresponding web crawler program is designed and implemented to scrape the target information from target website and store the collected data into local file eventually. Through the amount of data crawled and time consuming comparative analysis, the result demonstrates that the data collection method based on the Scrapy crawler framework is simple to operate, easily extensible, featuring being targeted, with high efficiency and fast speed in collecting shipping job hunting information. Fortunately, the collected data can not only help researchers conduct subsequent data mining analysis, but also can provide data support for the follow-up shipping job hunting information database.

## **6.2 Strategic Guidance to Assist Job Hunting for New Graduates**

The strategic guidance to assist to Assist Job Hunting for New Graduates composes of 4 units; namely, 1) Unit1: Careful preparation, 2) Unit2: Actively publicize and recommend yourself, 3) Unit3: Master the basic skills of interview, and 4) Unit 4: Successful job search steps. All the four units were evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.67 to 1.0 meaning the developed strategic guidance to assist to Assist Job Hunting for New Graduates was acceptable and could be used as guidance to assist to Assist Job Hunting for New Graduates at Shan Dong De Chou University to enhance the job hunting skills and competence of the new graduates. The contents in each unit focusing on Job hunting in university the extracted from referable and reliable sources and were then simplified to be suitable for the knowledge level for Job hunting learners. The part of practice in the Job hunting guidance in the Job hunting contexts for the teachers in Shan Dong De Chou University focus on practicing and enhancing Job hunting skills for comprehension of describing the details and information from the practice correctly and clearly. The contents of all practices encouraging learners to study Job hunting well. And the learners must be able to apply the knowledge obtained from the exercises to the real situations. This is correspondent with

Dongcheng Peng; Tieshan Li; Yang Wang; C. L. Philip Chen(2018), this helps the learners practice and develop their intelligence and competency in Job hunting learning. For students, to participate in Job hunting teaching, they must learn to adjust their mentality, understand that Job hunting teaching is not a holiday, and must adapt to the home learning environment; at the same time, parents should also provide certain supervision and guidance within their capabilities.

## **7. Recommendation for futher study**

The research on the effectiveness of the strategic guidance to assist to Assist Job Hunting for New Graduates needs to be conducted.

## **8. Acknowledgement**

Firstly, my sincerest gratitude should be goes to Dr. Uswin Chaiwiwat my major thesis advisor, Pol. Maj. Gen. Dr. Kitpinit Usaho, the co-advisor and Dr. Kris Phattaraphakin the Head of Ph.D.-M.Ed. program for their professional guidance, encouragement and kindness which inspired me a lot throughout conducting and writing this thesis. Without their persistent help, this thesis would not have been possible. Finally, I wish to thank every member in my family for their continued support and encouragement, who experienced all the ups and downs of my research.

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**The Academic Administration Guidelines towards the Cultivation of Students'  
Inquiry Learning Ability under the Condition of Information Technology at  
China University of Political Science and Law**

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**ABSTRACT**

The objectives of this research were: 1) To investigate the problems and needs including strengths and weakness of students, teachers, and administrations towards the cultivation of students' inquiry learning ability under the condition of information technology. 2) To develop guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology. The respondents in this research were 282 students and 10 teachers obtained through stratified random sampling at China University of Political Science and Law as a case study. The research instruments employed in this study were a questionnaire with 24 questions for 5 rating scales and Online interview. The information and data collected were analyzed through the content analysis method and presented in terms of percentage, mean value, and standard deviation. The findings indicated that: 1) Problems and Needs of students' inquiry learning ability under the condition of information technology in China University of Political Science and Law in terms of students' inquiry learning ability terms of where most in the "Highest" level indicating that the students' inquiry learning ability instructors in the educational levels. For students, Students' own cognitive structure is imperfect, students' thinking method is immature, and students' sense of active exploration is not strong. For teachers, they lack of depth in teachers' understanding of inquiry-based learning competencies, and poor choice of pedagogical approaches to inquiry-based learning. 2) Guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology: China University of Political Science and Law of four units; All the four units evaluated by the three specialists (One Thai professors and two English native speakers) in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC

values from 0.66 to 1.0 meaning the developed guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology: China University of Political Science and Law for teacher was acceptable and could be used as an students' inquiry learning ability teaching guidance in the China University of Political Science and Law to enhance their inquiry learning ability and knowledge.

**Keywords:** Guidelines, students' inquiry learning ability, China University of Political Science and Law.

## 1. Introduction

With the development of science and technology, the progress of society and the explosion of knowledge, we have stepped into an era of information. The demand of the society for talents is constantly increasing, which requires the quality of the students cultivated by the school to be improved. Simply relying on the original traditional education mode - acceptance learning has been unable to meet the needs of students' learning, and the cultivated students cannot meet the needs of the development of the information age (Zheng W ,2019).

In order to train talents to meet the needs of The Times, China has carried out many reforms, from exam-oriented education to quality education, the examination reform, curriculum reform and textbook reform, making the cause of education in China has made great development, especially the introduction of information technology, makes the education reform add wings to the tiger and develop more vigorously. In 2021, China's Basic Education Curriculum Reform Outline (Trial) proposed to change students' passive learning mode, transform passive into active, advocate students to conduct inquiry- based learning, acquire knowledge through their own hands and brains in the context. This helps students to use their brains, cultivate their creative thinking, acquire knowledge through their own efforts, no longer "freeloading", but also seriously look at their "fruits of labor" .The reform is mainly aimed at primary and secondary schools, with the aim of cultivating students' creative thinking and hands-on skills(Liu Q,2019) .

Colleges and universities also need to reform their teaching methods. College students should not only learn and use knowledge, but also have the ability of scientific research. Inquiry learning can cultivate their practical ability, but also their ability of scientific research innovation and practical application. Moreover, the quality of college students themselves and the learning environment of colleges and universities are more suitable for inquiry learning(Chen H,2019) .To sum up, under the background of the information age, college students have better information literacy and are more suitable to acquire knowledge through inquiry-based learning with the support of information technology. Therefore, the research of this subject is valuable.

## 2. Objective

1) To investigate the problems and needs including strengths and weakness of students, teachers, and administrations towards the cultivation of students' inquiry learning ability under the condition of information technology.

2) To develop guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology.

## 3. Review of Literature

### 3.1 Concepts/Theories/related/research

To study inquiry learning, we must first clarify what inquiry is. In Chinese, "inquiry" means "exploration and research", and the interpretation of "exploration" is "multiple parties to seek answers and solve questions". The interpretation of "research" is "to explore the nature of things, the law of development. Consider or discuss.

Inquiry learning introduces inquiry in the field of science into classroom teaching, enabling students to understand scientific concepts and the nature of scientific inquiry through the inquiry process similar to that of scientists, learn the general methods of scientific inquiry, and cultivate innovative awareness and practical ability (Guo Qingshun, 2007). Inquiry learning to the or processes in which students independently seek or construct answers, meanings or information around certain questions, texts or materials with the help and support of teachers (Ren Changsong, 2005). When students exchange their own ideas or perspectives through independent discussion, the ideas that the teacher participates in often attract the students' attention more than the individual lectures that are given at the beginning. As students' interest and enthusiasm for this issue have been stimulated and have entered a state of deep thinking, their various explorations and views on this issue have also attracted their attention.

### 3.2 Conceptual Framework

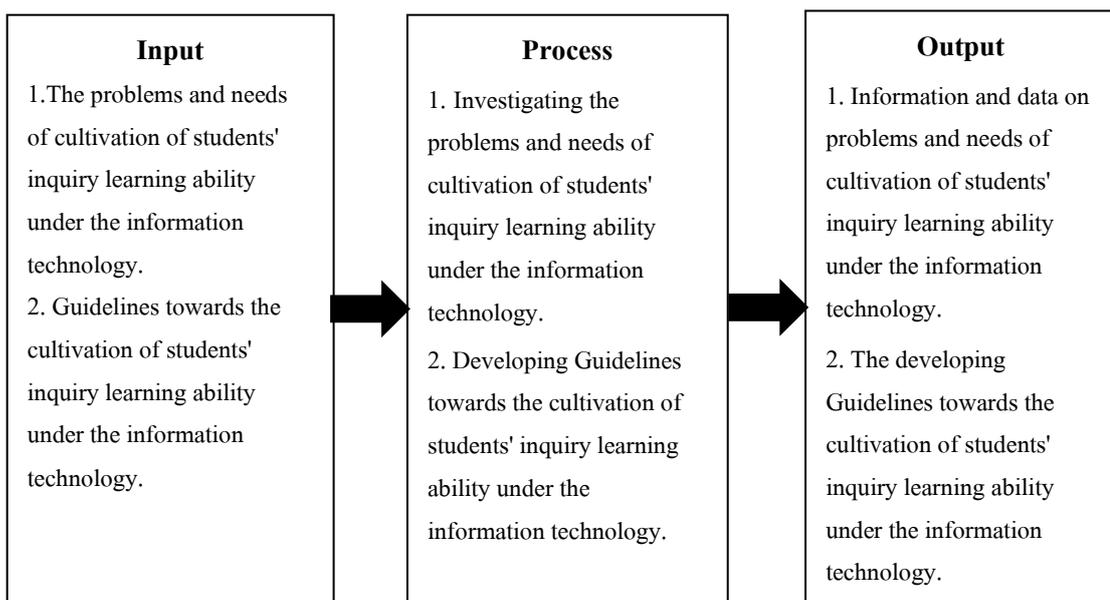


Figure 1 Conceptual Framework

#### **4. Research methodology**

##### **4.1 Population /sample**

In this research, China University of Political Science and Law was used as a case study. The population in this research project will be divided into 2 groups, namely; 1) 1000 students and 2) 10 teachers.

The sample groups were divided into 2 groups, namely, 1) 286 students and 2) 10 teachers. The respondents were obtained through the stratified random sampling technique. Moreover, the 3 specialists were used to samples for the focus group discussion meeting.

##### **4.2 Research instrument**

The questionnaires were constructed according to the review of other relevant research papers and theories of constructing questionnaires from other related textbooks both in Chinese and English. The questionnaires were evaluated and approved in terms for correctness and suitability of the contents by the three specialists. All of the questions in the questionnaires possessed the IOC (Index of Congruence) value of 0.66 to 1.00, which were acceptable for being used to collect data and information of this research.

##### **4.3 Data collection**

1.1 To collect the data and information for the investigating of the needs and problems of students' inquiry learning ability, the researcher herself e-mailed questionnaire to the 286 students and 10 teachers, then all of the questions were e-mailed back to the researcher.

1.2 To evaluate the guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology in terms of correctness and suitability of the contents by the three specialists, three focus group meetings were organized. The constructed guidance possessed the IOC (Index of Congruence) value of 0.66 or more for all the four units, which were acceptable for being used as a students' inquiry learning ability guideline for the teachers and students at China University of Political Science and Law.

##### **4.4 Data Analysis**

Totally 282 students and 10 teachers obtained through stratified random sampling. The Data and information collected were analyzed, interpreted and then presented in terms of frequency, mean ( $\bar{X}$ ), standard deviation (S.D.). The Five Point Likert Rating Scale was used to evaluate the respondents' problems of students' inquiry learning ability.

#### **5. Research result**

According to table1, it can be indicated that most of the teachers rated the problems of towards the cultivation of students' inquiry learning ability under the condition of information technology at the highest level of average score ( $\bar{X}$ ) at 4.56(S.D. =0.32), where students rated the problems of towards the cultivation of students' inquiry learning ability under the condition of information technology at the highest level of average score ( $\bar{X}$ ) at 4.55(S.D. =0.33. According to table2, it is indicated that most of the teachers rated the needs of towards the cultivation of students' inquiry learning ability under the condition of information technology at the highest level of average score ( $\bar{X}$ ) at 4.54(S.D. =0.33), where students rated the needs of towards the cultivation of students'

inquiry learning ability under the condition of information technology at the highest level of average score ( $\bar{X}$ ) at 4.53(S.D. =0.36. According to table3, it was indicated that all the four units evaluated by the three specialists in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) were found 0.66 to 1, which were acceptable for being used as a students' inquiry learning ability guidance for the teachers and students at China University of Political Science and Law to enhance students' inquiry learning ability.

Table 1 Problems of students' inquiry learning ability under the condition of information technology for students and teachers

Questions	n=286		n=10		Level of problems
	(students)		(teachers)		
	$\bar{X}_1$	S.D.	$\bar{X}_2$	S.D.	
<b>Problems</b>					
1) I am not very interested in inquiry learning.	4.50	0.37	4.50	0.37	Highest
2) For some complex problems, you really enjoy inquiry solutions.	4.51	0.39	4.51	0.39	Highest
3) When you encounter difficult mathematical problems, you usually discuss them with classmates and work together to solve them.	4.56	0.35	4.56	0.35	Highest
4) In classroom learning, you enjoy relying on information technology to solve problems.	4.59	0.29	4.59	0.29	Highest
5) You rarely have the ability to solve learning problems in multiple ways.	4.54	0.33	4.54	0.33	Highest
6) The main reason why you sometimes do not conduct evaluation and reflection in the classroom is that the teacher did not ask for reflection.	4.50	0.32	4.50	0.32	Highest
7) In regular classroom teaching, you rarely associate old knowledge with new knowledge.	4.60	0.25	4.60	0.25	Highest
8) When you cannot accurately understand a problem, your solution is to learn independently.	4.49	0.24	4.49	0.24	Highest
9) you think doing more practice questions on a regular basis can effectively improve your ability to identify problems.	4.56	0.36	4.56	0.36	Highest
10) You think inquiry learning is not important.	4.59	0.47	4.59	0.47	Highest
11) In learning, your inquiry learning ability is very strong.	4.58	0.40	4.58	0.40	Highest
12) In the study, the school curriculum is conducive to the development of inquiry learning skills.	4.63	0.21	4.63	0.21	Highest
Total	4.56	0.32	4.55	0.33	Highest

Table 2 Needs of students' inquiry learning ability under the condition of information technology for students and teachers

Questions	n=286		n=10		Level of needs
	(students)		(teachers)		
	$\bar{X}_1$	S.D.	$\bar{X}_2$	S.D.	
<b>Needs</b>					
1) I need to be interested in inquiry learning.	4.50	0.30	4.50	0.31	Highest
2) It is necessary to explore and solve complex problems.	4.47	0.51	4.51	0.51	High
3) When you encounter difficult problems, you need to discuss them with classmates and work together to solve them.	4.52	0.32	4.56	0.30	Highest
4) In classroom learning, you need to rely on information technology to solve problems.	4.51	0.41	4.52	0.41	Highest
5) You need to have the ability to solve learning problems in multiple ways.	4.50	0.35	4.51	0.35	High
6) It is necessary to conduct evaluation and reflection in the classroom.	4.53	0.37	4.52	0.23	High
7) In regular classroom teaching, you need to associate old knowledge with new knowledge.	4.56	0.32	4.56	0.32	Highest
8) When you cannot accurately understand a problem, you need to learn independently.	4.59	0.30	4.59	0.31	Highest
9) The ability to discover problems is crucial.	4.61	0.21	4.60	0.21	Highest
10) You think inquiry learning is not important.	4.58	0.42	4.58	0.24	Highest
11) In learning, your exploratory learning ability needs to be improved.	4.48	0.49	4.48	0.45	Highest
12) In the study, the school curriculum is conducive to the development of inquiry learning skills.	4.54	0.36	4.54	0.36	Highest
<b>Total</b>	<b>4.53</b>	<b>0.36</b>	<b>4.54</b>	<b>0.33</b>	<b>Highest</b>

Table 3 The Index of Congruence (IOC) of the four units as well as in each unit terms of correctness and suitability of the contents

Topics/Contents	IOC
Unit1: Overview and connotation of inquiry learning	
1.1 What is inquiry learning	0.66
1.2 Why is this course offered	1
1.3 How to study this course	0.66
Unit2: Inquiry learning methods and models	
1.1 Common methods of inquiry learning	0.66
1.2 The Basic Mode of inquiry Learning	0.66
Unit3: Implementation and Evaluation of Inquiry Learning	
3.1 Implementation of Inquiry Learning	0.66
3.2 Evaluation of Inquiry Learning	0.66
Unit 4: Case studies of inquiry learning projects	
4.1 Case studies of inquiry learning projects	0.66

## 6. Discussion of the Reasearch Resultls

### 6.1 Needs and Problems of students' inquiry learning ability under the condition of information technology.

The findings from the investigation of needs and problems of students' inquiry learning ability under the condition of information technology in China University of Political Science and Law. For students, Students' own cognitive structure is imperfect, students' thinking method is immature, and students' sense of active exploration is not strong. For teachers, they lack of depth in teachers' understanding of inquiry-based learning competencies, and poor choice of pedagogical approaches to inquiry-based learning. It is correspondent with S. H. Zhong and W. L. Zhou(2019), the findings include that The cultivation of high-quality innovative talents is the necessary way for talent training in China. This paper takes the human resource management in industrial enterprises as an example, changes the traditional cramming teaching method, and has analyzed that the inquiry and experiential teaching method has a promoting effect and important significance for cultivating students' innovative consciousness, innovative thinking and innovative ability, which provides effective means for education and teaching reform. Practice has proved that inquiry and experiential teaching methods is an effective way to cultivate high-quality innovative talents.

### 6.2 Guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology: China University of Political Science and Law

Guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology: China University of Political Science and Law of four units; namely, Unit1: Overview and connotation of inquiry learning; Unit2: Inquiry learning methods and models; Unit3: Implementation and

Evaluation of Inquiry Learning; Unit 4: Case studies of inquiry learning projects. All the four units evaluated by the three specialists (One Thai professors and two English native speakers) in terms of correctness and suitability of the contents and presented in terms of IOC (Index of Congruence) values. All four units were evaluated and possessed the IOC values from 0.66 to 1.0 meaning the developed guidelines towards the cultivation of students' inquiry learning ability under the condition of information technology: China University of Political Science and Law for teacher was acceptable and could be used as an students' inquiry learning ability teaching guidance in the China University of Political Science and Law to enhance their inquiry learning ability and knowledge.

## 7. Rescommendation for futher study

1) Suggest some strategies related to inquiry-based learning skills and improve the students' active exploration and think method.

2) For the further study, school should Enhancing students' learning of inquiry-based learning skills and improve teachers' understanding of inquiry-based learning competencies.

## 8. Acknowledgement

Firstly, my sincerest gratitude should be goes to my major thesis advisors for their professional guidance, encouragement and kindness which inspired me a lot throughout conducting and writing this thesis. Without their persistent help, this thesis would not have been possible.

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# **The Relationship of Chinese Grade 4 Students' Motivation and Perception of Classroom Environment for Learning English with English Academic Achievement**

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## **ABSTRACT**

This quantitative correlational study aimed to determine whether there was a significant relationship among Grade 4 students' motivation for learning English and perception of classroom environment for learning English with English academic achievement. There were 150 students from Class 1, Class 2 and Class 3 of Grade 4 enrolled in the academic year 2021-2022 at the target Public Primary School in China. The Students' Motivation and Perception of Classroom Environment for Learning English Questionnaire was used to collect the research data. Descriptive statistics and multiple correlation coefficient were used to analyze the data. The findings indicated that there was a significant, positive, and strong relationship among students' motivation for learning English and their perception of classroom environment for learning English with English academic achievement. Based on the findings, the researcher provides recommendations for teachers, school administrators, and future researchers.

**Keywords:** Languages, Academic achievement, English Learning Motivation, Perception of Classroom Environment, Academic Achievement, Public Primary School in China

## **1. Introduction**

In 1900, there were about 270 million English speakers globally. In 2023, the most spoken language in the world is English with about 1.5 billion speakers as either first or second/foreign language speakers (Emery, 2023). In order to develop their countries economically, politically and socially, countries such as China take English learning as a very important part of their development. Given the importance of English communication globally and especially in China, this study focused on the relationship between Grade 4 students' motivation for learning English and perception of classroom environment for learning English with English academic achievement at a Public Primary School in China.

## **2. Research Objectives**

(1) To determine the level of Grade 4 students' motivation for learning English at a Public Primary School in China.

(2) To determine the level of Grade 4 students' perception of classroom environment for learning English at a Public Primary School in China.

(3) To determine the level of Grade 4 students' English academic achievement at a Public Primary School in China.

(4) To determine whether there is a significant relationship of Grade 4 students' motivation for learning English and perception of classroom environment for learning English with English academic achievement at a Public Primary School in China.

## **3. Literature Review**

**The following sections present the theory, concept and related research of this study, followed by the research framework and the research hypothesis.**

### **3.1 Theory, Concept and Related Research**

#### **Gardner's Socio-Educational Model of Second Language Acquisition**

The socio-educational model was designed to examine the language learning situation and to investigate in the context of second/foreign language learning (Gardner, 2006). The model focuses on individuals' different characteristics, motivations, and relationships with their language learning and achievement (MacIntyre & Gardner, 1989). Dörnyei (2003) mentioned that learning another language is different from other types of learning that take place in schools. Learning a new language not only requires an individual's motivation, but also depends on the language level of the teacher, the teacher's teaching methodology and the learner's own language environment. The model has been revised many times, but significant concepts of the model remain the same with slight adjustments (Siphora & Lynch 2019).

#### **Motivation for Learning English**

Many previous studies have explored motivation for second/ foreign language learning contexts. Spolsky (1990) stated that motivated students are likely to learn more quickly than students who are less motivated. Dörnyei (1998) claimed that many educators and researchers widely respect motivation because it is an indispensable element that promotes students learning a second/foreign language. Hancock (2007) also pointed out that there is a direct correlation between academic achievement and motivation. If students are motivated in second/foreign language learning, they will have more passion to learn and more perseverance to overcome difficulties. They will be willing to spend more time to achieve learning goals. Student engagement in learning is not only an end in itself, but it is also a means to the end of students achieving desired academic outcomes (Ryan & Deci, 2009). It also affects teachers' attitudes and teaching strategies when they stimulate students' motivation in the teaching process.

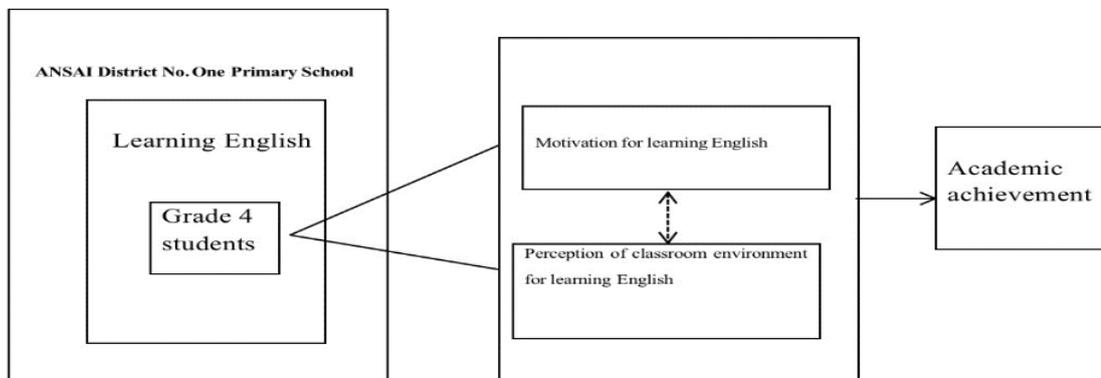
### The Concept of Attitudes in Foreign Language Learning

Attitude is a positive or negative evaluation made by an individual, which is expressed as favorable or unfavorable. It also helps guide learners to make the right actions, judge the pros and cons of their surroundings, and influence the way they evaluate others. Gardner and Lambert (1972) asserted that there was a close connection between attitude and achievement. They pointed out that learners' attitude toward the target language determined how successful they would be in learning that language. A positive attitude tends to a positive impact on academic performance. Chalak and Kassaian (2010) indicated that even though a positive attitude motivates the individual's learning, some individuals may hold an unfavorable attitude but they can work to overcome the negativity and push on to successful learning.

### Attitude/Motivation Test Battery (AMTB)

The Attitude/Motivation Test Battery (AMTB) has been used by many researchers and scholars in second/foreign language learning research (e.g., Siphora & Lynch, 2019; Wiriyanusorn, S., & Lynch, R. (2019). The original version of the AMTB focused on the investigation of English-speaking students from elementary and secondary school who were learning French as a second language in Canada (Gardner, 1985b). Later, Gardner (2004) developed an international version of the AMTB to examine learners' second/foreign language learning. There are 11 subscales and 104 items in the 2004 International AMTB. Figure 1 illustrates the research framework of this study.

### 3.2. Research Framework



### 3.3 Research Hypotheses

There is a significant relationship of Grade 4 students' motivation for learning English as a foreign language and perception of classroom environment for learning English with English academic achievement at a public primary school at a significance level of .05.

#### **4. Research Methodology**

This research was a quantitative correlational research study.

##### **4.1 Research Design**

The purpose of this research was to identify if there was a significant relationship among Grade 4 students' motivation for learning English and perception of classroom environment for learning English with English academic achievement at a Public Primary School in China.

##### **4.2 Population and Sample**

The sample of this study was comprised of a convenience sample of 50 Class 1, 50 Class 2 and 50 Class 3 students in Grade 4 at a Public Primary School in China during academic year 2021-2022.

##### **4.3 Research Instrument**

The research questionnaire was adapted from the International version of the Attitude Motivation Test Battery (AMTB). There are 104 items and 12 subscales in the AMTB. However, the researcher used 50 items from 5 subscales. Students' motivation for learning English was measured by 3 subscales, each comprising 10 items. Perception of classroom environment for learning English as a foreign language was measured by two subscales, each also comprising 10 items. The 50 items were both positively and negatively worded.

##### **4.4 Data Collection**

To collect data, the researcher translated the 50 items (employing back translation to check for validity) to create a questionnaire in Chinese for the English teachers in China who assisted the researcher to collect the data. A total of 150 questionnaires were distributed and 150 usable questionnaires were returned, with a recovery rate of 100%

##### **4.5 Data Analysis**

Data analysis consisted of descriptive statistics (means and standard deviations) and correlational analysis.

#### **5. Research Findings**

The research findings derived from the data collection and analysis are presented in accordance with the research objectives.

The first research objective was to determine the level of Grade 4 students' motivation for learning English. Table 1 shows the motivation for learning English of Grade 4 students was slightly high with a mean score 4.50; the motivational intensity of Grade 4 was slightly high with a mean score 4.92; the desire to learn English of Grade 4 students was slightly low with a mean score 3.81; the Attitudes toward learning English of Grade 4 students was slightly high with score 4.76.

Table 1 Mean Scores, Standard Deviations and Interpretations of the Grades 4 Students' Motivation for Learning English (N =150)

Variable	Grade4		
	$\bar{X}$	SD	Interpretation
Motivation for learning English as a foreign language	4.50	1.50	Slightly high
Motivational intensity	4.92	1.46	Slightly high
Desire to learn English	3.81	1.63	Slightly low
Attitudes toward learning English	4.76	1.41	Slightly high

The second research objective was to the level of Grade 4 students' perception of classroom environment for learning English. Table 2 shows the mean of English course evaluation of Grade 4 was slightly high with score 4.50. The mean of English teacher evaluation of Grade 4 was slightly high with score 4.29. The overall mean of perception of classroom environment for learning English of Grade 4 was slightly high with a score of 4.28.

Table 2 The Mean Scores, Standard Deviations and Interpretations of the Grade 4 Students' Perception of Classroom Environment for Learning English (N =150)

Variable	Grade4		
	$\bar{X}$	SD	Interpretation
Perception of Classroom Environment for Learning English .	4.28	1.43	Slightly high
English course evaluation	4.50	1.67	Slightly high
English teacher evaluation	4.29	1.34	Slightly high

The third research objective was to determine the level of Grade 4 students' English academic achievement. Table 3 shows that Grade 4 students had excellent performance with mean score 93.37.

Table 3 Mean, Standard Deviation and Interpretation for English Academic Achievement (N =150)

Grade level	N	$\bar{X}$	SD	Interpretation	Minimum scores	Maximum scores
Grade 4	150	93.37	6.30	Excellent	69	100

The fourth research objective was to determine whether there was a significant relationship of Grade 4 students' motivation for learning English and perception of classroom environment for learning English with

English academic achievement. As Table 4 shows, a significant, very strong multiple correlation among the students' motivation for learning English and perception of classroom environment for learning English and the English academic achievement was obtained,  $R = .93$ ,  $F(2,147) = 444.35$ ,  $p < .001$ . The multiple correlation coefficient obtained indicates that the students' motivation for learning English and perception of classroom environment for learning English account for 86% of the variance of the English academic achievement,  $R^2 = .86$ .

Table 4 Multiple Correlation Coefficient Analysis Among Students' Motivation for Learning English and Perception of Classroom Environment for Learning English with English Academic Achievement

Independent variables	R	R <sup>2</sup>	df	F	p
Students' Motivation for Learning English and Perception of Classroom Environment for Learning English with English Academic Achievement	.93	.86	2, 147	444.35	.000

## 6. Discussion

### Motivation for Learning English

The researcher found the overall level of motivation for learning English of the target students was slightly high. Hancock (2007) pointed out that there is a direct correlation between academic achievement and motivation.

The findings indicated that the target students' motivational intensity was moderately high, and the target students showed positive attitude and behavior for learning English. Spolsky (1990) stated that motivated students are likely to learn more quickly than students who are less motivated. In a given learning situation, students who lack motivation are more likely to lose attention, misbehaving, causing disciplinary problems. On the contrary, those who are more motivated to learn are actively involved and pay more attention to study tasks or activities.

This study reached the same conclusion as previous researchers, e.g., Asmali (2017), Genc and Aydin (2017), and Siphora & Lynch (2019). that students who are highly motivated to learn English also have a positive attitude for learning English.

### Perception of Classroom Environment for Learning English

The researcher found the level of perception of classroom environment for learning English was slightly high, and there was a significant, very strong and positive relationship between motivation for learning English and perception of classroom environment for learning English. The findings indicated that the English course evaluation was slightly high, and the English teacher evaluation was slightly high, with the target students showing positive attitude and behavior for learning English.

This study reached the same conclusion as previous researchers (e.g., Momani, 2009; Siphora & Lynch, 2019), i.e. that those who are highly motivated to learn English also are satisfied with teachers' teaching context, teaching styles and teaching strategies. Lwin (2007) also stated that the quality of education largely depends on the quality of the teachers. If a teacher's teaching mode is creative and the teaching content is lively and interesting, then the students' learning motivation will be stimulated. On the contrary, if the teacher's teaching mode is rigid and the teaching content is boring, the students may have resistance and lose their motivation (Lwin, 2007).

#### **Academic Achievement**

The researcher found the level of Grade 4 students' English academic achievement was excellent. It can be concluded that the target students were highly motivated for learning English, and the target students had a high degree of satisfaction with the classroom learning environment. They agreed with their English teacher's teaching strategies and teaching styles. They were engaged with the teaching context. Student engagement in learning is not only an end in itself, but it is also a means to the end of students achieving sound academic outcomes (Ryan & Deci, 2009).

Tsavga (2011) maintained that learning environment plays a vital role in determining how students perform or respond to circumstances and situations around them. The target students in the current study were motivated by their teacher's teaching styles and context  and so achieved excellent academic outcomes.

#### **Motivation for Learning English and Perception of Classroom Environment for Learning English with English Academic Achievement**

The researcher found that there was a very strong and significant relationship of Grade 4 students' motivation for learning English and perception of classroom environment for learning English with English academic achievement. The students' motivation for learning English and perception of classroom environment for learning English accounted for 86% of the variance of the English academic achievement.

The current research results showed that the target students had a relatively high level of motivation for English learning. Gardner and Lambert (1972) pointed out that a close relationship exists between attitude and achievement. Siphora and Lynch (2019), Hancock (2007) and Dörnyei (1998) were used for this study which reached the same conclusions as those previous studies that academic achievement goes up when motivation goes up, and academic achievement goes up when perception of classroom environment goes up.

### **7. Suggestions**

The findings of the research indicated that English academic achievement can be increased by increasing students' motivation for learning English and perception of classroom environment for learning English. Therefore, teachers should stimulate students' enthusiasm for English learning to the greatest extent, encourage them to take the initiative to participate in English learning and enjoy the learning process. At the same time, teachers should adjust the teaching methods according to the feedback of students in time to increase the interest of the course content through allowing some choice in the topics they read, write and speak English

about in class.. The level of motivation for learning English of the target students was slightly high, so they had a positive attitude towards learning English, and teachers' teaching content. However, in order to further stimulate students' passion for learning English, teachers might consider adjusting their teaching methods and class activities. They could observe other teachers' classes, and adjust their own teaching methods, content presentation methods, and interaction modes with students so as to more stimulate students' learning motivation.

The findings of the research indicated that there was a very strong and significant relationship of Grade 4 students' motivation for learning English and perception of classroom environment for learning English with English academic achievement. In this case, the researcher agrees with other researches cited above that the factors and characteristics of English teachers have a significant relationship with students' motivation and perception of classroom environment in learning English. The researcher recommends that during teacher training, teachers should be encouraged to show the students that learning English can be fun and exciting through their (teachers') own personalities and by using games and role plays as class learning activities. They should also use online sources as resources for their teaching and the students' learning.

Due to limitations, the researcher was only able to collect the data of three classes of the fourth grade for analysis. In order to ensure the accuracy of the research results, the researcher suggests that a larger number of students should be targeted in the future and at different grade levels.

## **8. Acknowledgements.**

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## **The Development of Training Course based on Nondirective Teaching Theory to improve Visual Communication Design Ability of Undergraduate Students**

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### **ABSTRACT**

The objectives of this research were 1) to develop the training course based on nondirective teaching theory to improve visual communication design ability of undergraduate students and 2) to compare students' visual communication design ability before and after training course based on nondirective teaching theory. The sample group were 38 fourth-year students in fine arts major of the State University in the second semester of the academic year 2023. Through cluster random sampling. The research instruments involved 1) Activity plan according to the nondirective teaching theory and 2) Visual communication design ability test (multiple-choice test and performance test). Data were statistically analyzed by mean, standard deviation, and t-test for dependent samples. The findings were revealed that:

1) The development of training course based on nondirective teaching theory to improve visual communication design ability of undergraduate students has synthesized into 5 steps: 1. Study stage, 2. Discussion stage, 3. Thinking stage, 4. Planning creation stage, and 5. Summary analysis stage, as well as taking used to develop an activity plan. The results are shown the quality of the activity plan by experts overall had the most suitable. 2) The comparison of students' visual communication design ability before and after learning by using nondirective teaching theory of undergraduate students. The results were found that after the experiment was higher than before the experiment statistically significance at the level .01. The using nondirective teaching theory increase students' visual communication design ability.

**Keywords:** Visual communication design ability, Nondirective teaching theory, Undergraduate students

### **1. Introduction**

Visual communication design is a discipline that reflects the social development situation and constantly leads the social lifestyle, and also constantly innovates, keeps up with the trend of the times, advocates innovation and vitality, and is closely related to social life. From the current development point of view, the development of visual communication design education in the country is constantly expanding, and the society's demand for talents is also increasing, and it is urgent to solve the existing main contradictions in talent training. (Chen, 2014). Visual education in the most intuitive way to hands-on education can help students improve their practical ability to better understand their own development direction. However, the traditional visual communication design

teaching concepts, content, methods, models and methods are still following the existing routines in the past, breaking away from the existing social reality, and failing to provide timely and effective professional guidance to students. (Li, 2017). The visual communication design major should break the previous closed teaching, extend the classroom from time and space, and create a free learning environment for students.

The teaching of visual communication design is more focused on theoretical teaching, which makes students passively accept various theoretical knowledge in the classroom, and lacks the process of independent thinking and self-practice. At present, the teacher-centered classroom is no longer suitable for college education, and this teaching model not only does not get students to be qualitatively improved, but the whole classroom is also boring and lifeless. Teachers do not have enough understanding of the thinking guidance and self-construction of students majoring in visual communication design, which is not enough to support them to learn and give full play to their professional skills. (Zhang, 2018). The educational and teaching achievements of visual communication design major are inseparable from teachers teaching innovation mode, pioneering thinking and students' consciousness of independent research and creative creation.

Using nondirective teaching theories can optimize the concept of curriculum education, and no longer limit teaching to the teacher himself and boring knowledge; Students can discover their own strengths and weaknesses in the classroom, and discover their own shortcomings; At the same time, you can also speak freely, express your true thoughts, and stimulate your interest in design, rather than blindly designing for design; The teacher's role in the classroom is that of a facilitator rather than a leader. Wang (2017) summarizes in that. Learning, teachers are merely advisors, participating in discussions at the request of students, rather than instructing or non-operational. The visual communication design major should break the previous closed teaching, extend the classroom from time and space, and create a free learning environment for students. Teachers can not only choose the teaching space according to the teaching content, but also change the rigid teaching methods in the past, guide students to change from passive learning to active learning, and then stimulate their creative thinking, further cultivate students' communication ability and independent learning ability, and enhance students' ability to analyze and solve problems.

In summary, the traditional visual communication design classroom needs to be innovated to strengthen students' practical ability and achieve the purpose of students guiding the classroom. At the same time, non-guiding teaching theory is suitable for all stages of current visual design teaching, which not only enables students to become the leader of the classroom, learn to learn actively, stimulate their inner interest in learning, but also improve their visual communication design ability and independent thinking ability. It can be seen that this teaching method is positive and effective. Therefore, researchers are interested in improving students' visual communication design ability through nondirective teaching methods, thereby improving students' interest and achievement.

## **2. Research Objective**

(1) To develop the training course based on nondirective teaching theory to improve visual communication design ability of undergraduate students.

(2) To compare students' visual communication design ability between before and after training course based on nondirective teaching theory.

### **3. Literature Review**

#### **3.1 Training course**

The training course is mainly based on training and the trainees can master a certain skill through training, observation, etc. The training is primarily skills-based, with a focus on behavioral practice. In order to achieve unified scientific and technological specifications and standardized learning, through modern information processes such as goal planning and setting, knowledge and information transmission, skill proficiency exercises, homework, and achievement evaluation. Trainees can achieve the expected level of improvement goals, improve personal ability and work ability through certain means. As Peter (2003) said about training courses: It is an important part of various development projects. Good training helps participants gain new knowledge and skills, and the attitude that will help them put these things into practice to change their situation. And Hu (2019) said that training courses in the information age technology can be used as a new component of teacher training content. It can also be used as a new way to support teacher training. By providing strong support to teacher's professional development.

#### **Nondirective teaching theory**

Nondirective teaching theory, also known as humanistic teaching theory, it is a teaching theory that arose in the United States in the 1960s, and its representative figure is the American humanistic psychologist Rogers. In 2014, the theoretical knowledge involved in the teaching model was re-summarized and updated. "Nondirective teaching theory" emphasizes that everyone has the motivation to learn and can determine their own learning needs; teaching must be student-centered; teachers are the facilitators who help students explore life; and the ultimate goal of teaching is to promote the development of students' personality. "Nondirective teaching theory" not only had an impact on the educational practice and educational theory in the United States, but also played a positive role in promoting the development of education in other countries, including China. Zhang (2006) said the core of Rogers' theory of "nondirective teaching" is people-oriented, focusing on people in the teaching process, that is, respecting people, understanding people, and caring for people; Focus on human development, that is, emphasize human value and develop human potential; Classroom teaching does not stop at the level of memorizing knowledge, but promotes constructive changes in personality through the transmission of knowledge. Gu (2009) said: Rogers' humanistic-centered nondirective educational philosophy pays full attention to students, to the growth of students as a whole personality, to students' meaningful learning and learning to learn, and to teachers as facilitators of learning.

#### **Visual communication design ability**

Visual communication design ability is an active act of communicating a particular thing through visual forms. Most or part of it relies on vision and is represented in the image of two-dimensional spaces such as logos, typesetting, painting, graphic design, illustration, color and electronic equipment. Visual communication design ability meaning is: good design the work not only has its "shape" because of its exquisite production, but also has "god" because of the support of profound cultural heritage, "both form and god" can truly be called an excellent design work, and only such works can truly realize the beautification of public life and improve. The importance of having high professional theoretical literacy also lies in being able to grasp the inherent laws of design, consciously use theory to guide practice, and transform spontaneous design behavior into conscious creative

activities. The so-called "visual symbols", as the name suggests, refers to the human visual organs - the eyes can see the symbols that can express the certain nature of things, such as photography, television, movies, plastic arts, buildings, various design products, urban architecture and various sciences, texts, but also including stage design, music, heraldry, ancient coins, etc. are all seen with the eyes, they all belong to visual symbols. Wang (2020) said visual communication design is a subject with strong practicality and application. This major requires students to have certain innovative thinking and innovative ability. Huang (2021) said professional design ability is the first requirement that a professional designer must have. In China's current visual communication design major, many students are overly valued and rely on computer technology, and they understand excellent professional design ability as proficiency in computer software. It is true that proficiency in computer technology itself is understandable and a necessary ability.

### **Measurement and Evaluation**

The standardized tests involved in the process of measurement assessment and evaluation enables the students to make better use of the data available in the daily classroom. It offers learners with an understanding of the role of assessment and evaluation in the instructional process. Measurement assessment and evaluation also helps the teachers to determine the learning progress of the students. Without measuring and evaluating their performance, teachers will not be able to determine how much the students have learned. Dylan (2016) said Michael Scriven first proposed four types of classroom assessment in his research: positional assessment, formative assessment, diagnostic assessment. 1) Positioning assessment: Also known as placement assessment, preparatory assessment. It is mainly evaluated before specific teaching activities to determine students' preparation. 2) Formative assessment: It is an evaluation carried out in the teaching process, which is an assessment of students' learning results and teachers' teaching effects to guide the correct and perfect progress of the teaching process. 3) Diagnostic assessment: It is mainly to further evaluate the teaching background and all aspects of the student's situation, and it focuses on the in-depth investigation of repeated mistakes in students' learning. 4) Summation assessment: It is an evaluation that judges the degree of achievement of the entire teaching goal after a relatively complete teaching stage. A summative assessment can use a variety of tests at (Roediger & Marsh, 2005) proposed a multiple-choice question format, which is a type of question or method of selecting one or more options as the correct answer. The questions also have different characteristics from other types of multiple-choice questions: First, it can measure knowledge and ability at multiple levels such as memorization, understanding, analysis, and synthesis; Second, it can control the guessing behavior, because it is not the only correct option, the combination of options is varied, students cannot score based on guessing alone, only have a certain ability to ensure that the choice is correct; and Third, its scoring rules are fixed and consistent, with high reliability, and convenient scoring, which is conducive to the realization of computerized tests. In this research to use the multiple-choice test, with 4 choices, for measurement knowledge and develop performance tests was authentic assessment (holistic rubric) the scoring criteria used to measure the visual communication design ability for 5 scale.

### **3.2 Research Framework**

Visual communication design is a subject with strong practicality and application. This major requires students to have certain innovative thinking and innovative ability (Wang, 2020). In China's current visual communication design major, many students are overly valued and rely on computer technology, and they

understand excellent professional design ability as proficiency in computer software. It is true that proficiency in computer technology itself is understandable and a necessary ability (Huang, 2021). The researcher has studied the documents and research related to nondirective teaching theory from many researchers: Rogers (1969); Maryam Hasan (2013); Lu Mingjuan (2019); Guan Xin (2020). In this research, researcher has synthesized into 5 steps used to develop an activity plan according to the nondirective teaching theory of undergraduate students and defined as a framework for research concepts as follows:

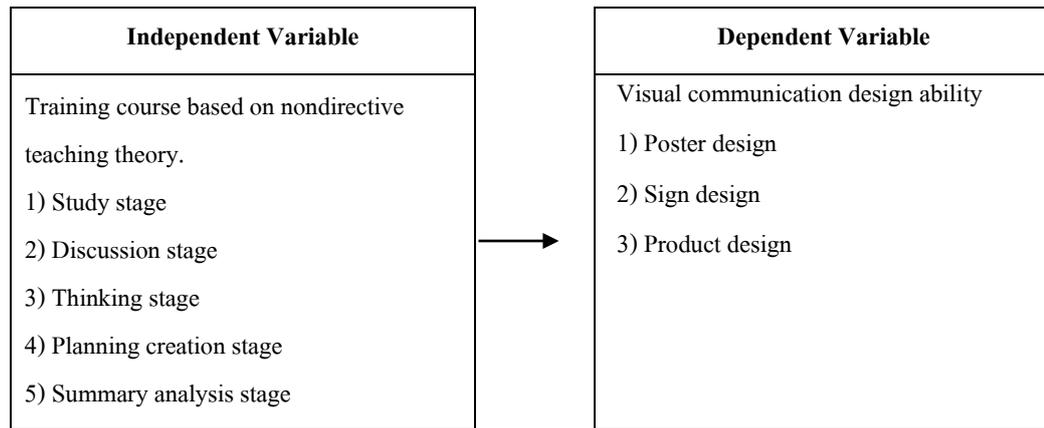


Figure 1 Research Framework

### 3.3 Research Hypotheses

After the training course based on nondirective teaching theory, the students have improved visual communication design ability explicitly.

Hou (2002) This research report, 36 students from the Art Department of Chengdu Institute of Education were selected for teaching experiments. In unguided teaching, the basic task of the teacher is to allow students to learn on their own, so that they can satisfy their curiosity and thus achieve a sense of success. Teachers need to help students understand what they want to learn, discover what they can do themselves, provide learning resources, help students learn the means to use, and decide for themselves how to learn. Huang (2021) This paper investigates and studies the visual communication design major of Hainan Tropical Ocean University the learning status of 56 students in the sophomore year, combined with the background of "Internet + education", proposed a teaching reform strategy for visual communication design. This study concludes that under the background of the "Internet + education" era, the previous school education model is being challenged, and the targeted and personalized feedback and services provided by the Internet make the formation of a personalized lifelong education system possible. The universality and equity of education also make the threshold for inter-professional getting lower and lower. Nondirective learning can not only help students improve their interest in visual communication design, but also cultivate good self-directed learning habits.

## 4. Research Methodology

### 4.1 Research Design

This research was experimental research. The researcher conducted the experiment using a single group experimental design. Test before experiment and posttest (One Group Pretest–Posttest Design), as shown in table 1.

Table 1 Experimental design

Group	Pretest	Experimental	Posttest
R	O <sub>1</sub>	X	O <sub>2</sub>

The meaning of the symbols used in the experimental design.

- R means Random Sampling
- X means experimental
- O<sub>1</sub> means Pretest
- O<sub>2</sub> means Posttest

#### 4.2 Population and Sample

The Population: There were 912 fourth-year students from 24 classes in fine arts major of the State University in the second semester of the academic year 2023 (There were student's mixed ability, high level, medium level and low-level abilities.)

The Sample group: There were 38 fourth-year students from 1 class in fine arts major of the State University in the second semester of the academic year 2023. Through cluster random sampling from 1 class, each class has student's mixed ability, high level, medium level and low-level abilities.

#### 4.3 Research Instrument

The development of training course based on nondirective teaching theory to improve visual communication design ability of undergraduate students. The researcher has studied the documents. Research related from many academics: Karen Cozzie (2013); Lisa Evans (2020); Madison Boehm (2022); and Javaid Arshad (2023). In this research, the researcher has synthesized 5 stages: 1) Study stage, 2) Discussion stage, 3) Thinking stage, 4) Planning creation stage, and 5) Summary analysis stage. The research instruments follow: 1) Create 3 activity plans according to the development of training course based on nondirective teaching theory, 15 hours, and 2) Visual communication design ability test (multiple-choice test and performance test).

1) An activity plan had an IOC consistency index greater than or equal to 0.50, so it was considered suitable for use in research. The result of the Index of Item Objective Congruence (IOC) analysis of this activity plan has an IOC = 1.00 for all questions.

2) The multiple-choice test can measure knowledge and ability at multiple levels, the result analysis of quality 41 items was IOC=1.00 for all questions, difficulty value (p) in the range of 0.29-0.71 and discrimination power (r) in the range of 0.21- 0.53. and reliability (KR-20) = 0.79. And creating design performance tests for 3 contents, several 6 items can recheck student's knowledge to used them work, the result analysis was IOC=1.00 for all questions.

#### 4.4 Data Collection

This research was divided into 3 phases, the details are as follows.

1. Pre-experiment phase: 1) Organize an orientation before starting the experiment to understand students how to study student role learning objectives evaluation method and the benefits that will be gained from taking the ability test and learning activities during the experiment. 2) Test before teaching (Pre-test) with fourth-

year students in fine arts major of the university in the second semester of the academic year 2023, the number of 38 people, which is a sample group, and check the score record in order to analyse the data.

2. Experiment phase: The experimental phase is the phase in which the sample group learns using the activity plan developed by the researchers based on the nondirective teaching theory. The teaching time on 4th July - 7th July total of 15 hours, not counting the days of pre-test and post-test.

3. Post-experiment phase: After all the content has been taught, a proficiency test is given to a sample group of students. Test after learning (Post-test), and then check and score according to the scoring standards formulated by the researcher. Once the scores have been reviewed and combined, the scores are submitted for further data analysis.

#### 4.5 Data Analysis

The researchers analyzed the data. Using the Excel program, the order in which the data were analyzed was quantitative data were analyzed through descriptive statistics; means, and standard deviation. And data were analyzed through inferential statistics; Then calculate the different score of learning ability before and after using instructional model were analyzed through t – test for dependent sample.

### 5. Research Findings

This research was to develop the training course based on nondirective teaching theory to improve visual communication design ability of undergraduate students and to compare students' visual communication design ability between before and after training course based on nondirective teaching theory of undergraduate students. The data analysis result can be presented as follows:

1. The development of training course based on nondirective teaching theory to improve the visual communication design ability of undergraduate students, the research has studied the documents and research related to nondirective teaching theory from many researchers and synthesized into 5 steps used to develop an activity plan according to the nondirective teaching theory of undergraduate students. The data analysis was assessment of the quality of the activity plan according to nondirective teaching theory by 3 experts, the results of the quality of the activity plan by experts overall has the most suitable.

2. The comparison of students' visual communication design ability between before and after training course based on nondirective teaching theory of undergraduate students as follow table 2.

Table 2 The comparison of visual communication design ability score between before and after learning

Visual communication design Ability	Testing	Score total	$\bar{X}$	SD.	t	p
Poster design	Pre-test	24	11.89	1.09	38.07**	.00
	Post-test		18.50	0.98		
Sign design	Pre-test	24	10.95	0.89	33.53**	.00
	Post-test		18.37	0.59		
Product design	Pre-test	23	10.97	1.13	36.08**	.00
	Post-test		17.50	0.76		
Total	Pre-test	71	37.97	2.99	48.92**	.00
	Post-test		61.10	1.99		

\*\*Statistically significant .01 level (p<.01)

From table 2, the comparison of students' visual communication design ability before and after learning by using nondirective teaching theory of undergraduate students. The results are shown the average score before learning was 37.97, the average score after learning was 61.10. The results were found that after the experiment was higher than before the experiment statistically at significance level .01.

## 6. Discussion

Research results on the development of visual communication design abilities 38 fourth-year students in fine arts major of the State University in the second semester of the academic year 2023 by using nondirective teaching theory can be discussed as follows.

The development of training course based on nondirective teaching theory to improve the visual communication design ability of undergrad students. The research has studied the documents and research related to nondirective teaching theory from many researchers and has synthesized into 5 steps used to develop an activity plan according to the nondirective teaching theory of undergraduate students. The data analysis was the assessment of the quality of the activity plan according to the nondirective teaching theory by 3 experts, and the results are shown the quality of the activity plan by experts. Learn completely related the content is clear and comprehensive. The activities that are established emphasize that learners can actually learn, practice thinking, and practice in terms of teaching media. In terms of measurement and evaluation is determined to be an assessment based on actual conditions and to measure according to the learning objectives and in determining the work piece and workload are appropriate in accordance with the learning objectives, which is consistent with the research (Guo, 2020) and (Huang, 2021), through the development of actual activity plan cases based on nondirective teaching theory to examine the student visual communication design outcomes of nondirective teaching theory that are fully applied to actual teaching. In addition, Rogers (1969) emphasis on learning based on nondirective instruction is the standard for student-directed learning. In (Lu, 2019), the result shows that the nondirective teaching theory emphasizes that everyone has a natural tendency to healthy development, and that interpersonal relationships full of sincerity, trust and understanding will contribute to the stimulation of students' potential. The teaching process of nondirective teaching theory generally consists of 5 steps. In different literature, the development and implementation of nondirective teaching theory have further details.

The comparison of students' visual communication design ability between and after learning by using the nondirective teaching theory of undergraduate students. The results are shown the average score before learning was 37.98, the average score after learning was 61.11, and the mean difference was 23.13. The results were found that the visual communication design ability of students after learning higher than before learning statistically significant at the .01 level, which was in accordance with the hypothesis. The theory of nondirective teaching adheres to the student-centered teaching concept, advocates the meaningful free learning concept, promotes the self-realization of the teaching goal concept, and the equal and harmonious teacher-student concept. This is the same as (Yin & Tang, 2018). Meanwhile, this kind of teaching can not only expand students' thinking, stimulate students' interest in learning, but also fully play the main role of students from the perspective of students' psychology, so that students can continuously improve their design ability in the process of independent learning. The research concludes that "student-centered" is the main educational idea of nondirective teaching, and the study of nondirective teaching is to develop students in an all-round way under the guidance of modern educational concepts; this is consistent with (Shi, 2012). As a result of the ordinary method to the first group,

students' achievement grades increased by approximately 9 points; as a result of the nondirective teaching theory applied to the second group, students' achievement grades increased 23 points approximately, and the results show that nondirective teaching theory has a positive effect on students' success and that choosing the proper teaching method suitable to students' individual interests and abilities is very important.

In conclusion, this paper has shown that nondirective teaching theory can be used as an effective teaching strategy to create a student-centered learning environment in the visual communication design class. The principle of "nondirective" teaching emphasizes that students are the center and subject of the learning process, and teachers do not regard themselves as high-ranking instructors, but create conditions for students to learn as equals, trust students, promote a good learning atmosphere, create a safe, harmonious, sincere and open learning environment, and ensure students' psychological freedom to fully think and research, feel the joy of learning, and think independently. If teachers adhere to practice and exploration, think and change while doing, classroom teaching will be rejuvenated. The article can conclude that non-guiding teaching theory can help students clarify how to actively absorb knowledge in future learning, no longer passively absorbed, but transformed into interest. At the same time, the use of non-guiding teaching theories can indeed improve students' visual communication design ability.

## 7. Suggestion

(1) Sample selection when random sampling is used, the sample of students sampled is not representative of the parent being studied, which may cause problems related to statistical selectivity bias in the study.

(2) Nondirective teaching theories are not commonly used in teaching today, so when conducting research, there is not enough literature related to the research topic. The literature may also be limited due to the different scope of the research topics.

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## **The Narrative Structure and Audiovisual Language of Thriller Films**

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### **ABSTRACT**

The research aims to (1) To study the narrative structure of thriller films. (2) To study the audio-visual language of thriller films. This is a qualitative study using text analysis of six award-winning thriller films released between 2000 and 2023. The selected films are as follows: 1) The Bourne Identity 2) Identity 3) No Country for Old Men 4) Inception 5) Argo 6) Train to Busan. The result found that:

Part 1: The narrative structure of thriller film

In terms of the narrative structure of thriller films, most of them use binary opposition to shape characters, set up conflicts, and combine nonlinear narrative structure with limited space and flashbacks. In addition, a small number of thriller films adopt the classic three-act structure, set the plot in a limited space, enhance the suspense of the film, and form a clear narrative style and a relaxed narrative rhythm.

Part 2: Audio-visual language of thriller film

In terms of the audio-visual language of thriller movies, most of them arrange the cinematography in different ways, comprehensively use a variety of staggered light and shadow, composition, sound and montage editing techniques to shape the character image and character relationship, create film suspense and create a thriller atmosphere.

**Keywords:** Thriller Film, Narrative Structure, Audiovisual language, Suspense

### **1. Introduction**

The thriller film, also known as the suspense thriller, is a broad genre of film in which the element of suspense is often present in the plot of such films, and producers of the thriller genre in particular are very keen on this element. The dramatic tension of a thriller lies in building tension through something that the audience perceives as inevitable and through scenes of intimidation and escape from the inevitable. Fighting or chase

scenes are a common way to mask important plot points from the audience. In a typical thriller, lives are often threatened. For example, when the main characters do not realize that they are entering a dangerous situation. The characters in a thriller often fight each other internally or clash with the outside world, and this conflict can be abstract. The main characters are usually set up to enter the plot because of an escape, a mission, or a mysterious event. (Li Yawen,2018)

Thriller films can be broadly classified into the following categories, action thriller, psychological thriller, crime thriller, science fiction thriller, political thriller, disaster thriller, etc. In this thesis, the author will choose six thriller films of different subgenres to analyze the narrative structure and audio-visual language of thriller films. The research object of this thesis is the narrative structure and audiovisual language of thriller films. Based on the literature review, this thesis defines the concept of narrative structure and audio-visual language of thriller films, as well as the function and value of the thriller film genre, and conducts a comprehensive analysis, hoping that through this thesis, more people will understand the narrative structure and audiovisual language of thriller film genre and have a more in-depth and accurate understanding of thriller film genre. Through such analysis, it can help the audience to better appreciate and understand the thriller film, improve the understanding and appreciation of the thriller film, but also let the director and screenwriter understand the audience's favorite thriller genre, to create a more popular and more valuable thriller film.

## **2. Research Objective**

- 1) To study the narrative structure of thriller films.
- 2) To study the audio-visual language of the thriller films.

## **3. Literature Review**

### **3.1 Thriller Film**

Thriller films, also known as suspense films and thrillers, create fear and panic by showing the alienated physical and mental states of human beings in extreme situations, including war, death, disease, accidents and natural disasters. When it comes to the qualities of thriller movies, the first thing that comes into view is the tension and excitement, which comes from the sensory stimulation brought by the storyline and rhythm of thriller movies. Through the performance of this tension and excitement, we will find that there are many factors behind an excellent thriller film, such as a compelling storyline, the right pace, rapid and powerful action, and the characterization of the positive and negative characters (Dan Lingling, 2014).

### **3.2 Narrative Structure**

Zhu Lin (2017) pointed out that the interpretation of the three-act narrative structure is that the three-act narrative structure unfolds along a time chain sequence of beginning, development, climax and end, in which the dramatic hook that pushes the story forward is called the plot point, which is usually a turning event. Xie Xintong and Shao Yulian (2019) explained that thriller movie mainly adopts the non-linear narrative structure. The biggest feature of the non-linear narrative structure of thriller films lies in the breaking and contacting of a

single time direction, which becomes a disjointed fragment and produces a back-and-forth reversal. Wang Weinan (2021) pointed out that anti-linear narration is mostly used in artistic films such as prose culture films, poetic films and experimental films. These films all show a common feature, that they do not respect narrative, deliberately dilute narrative, dilute plot, dilute characters, more to express a mood or philosophy.

### **3.3 Audiovisual language**

Xu Zhe (2013) pointed out that the modeling function of color, specifically speaking, is to use color to depict images, accentuate the atmosphere, strengthen the emotional appeal of works, and fully reveal the content of works. Shi Shaochen (2013) pointed out that sound plays a lot of roles in films, deepening the theme of the film, deepening the emotions of the characters, rendering the background atmosphere, and expressing the inner emotions of the characters. Xia Yao (2013) pointed out, the treatment of cinematography in thriller films is not only an important part of the director's artistic creation, but also one of the important modeling means of photography creation. Hu Ming (2014) pointed out that montage refers to editing and combination in film and television creation, which is simply the splicing of shots, and is the beginning of film creation completely breaking away from the expression of stage plays. A strong visual effect can be formed by the separate existence of field in the shot, the arrangement of front and back, the combination of paragraphs and the organic use. Dan Chengjie (2021) pointed out that light and shadow, as an important visual element shaping the artistic language of films, can show different artistic effects through the contrast and change of brightness and tone, enhance the impact and appeal of the picture, and thus affect the psychology of the audience. Zhang Wanjie (2021) pointed out that the selection of reasonable and accurate composition in film works can reveal the relationship between characters in a true and delicate way, promote the narrative, set off the atmosphere, and further enhance the artistic value of the works.

### **3.4 Related Research Literature**

In addition to the elements of atmosphere creation, psychopathy and physical violence, thriller films also add some unexpected changes to the audience, as well as layers of suspense, creating a plot development that the audience is difficult to predict, so that the audience has been maintaining a nervous mood, causing a tense anxiety to its nerves. When shooting a thriller film, through the choice and design of the scene, the control of the time rhythm, the adjustment of sound factors and the grasp of the color and light of the picture, the thriller atmosphere of the film is created, and then the success or failure of the thriller film is determined (Wang Feng,2018).

Since the beginning of the 20th century, the genre development of thriller film has become increasingly mature. Many classic thriller films, whether it is the construction of the story itself, the setting of the character relationship, or the grasp of the narrative structure, have maintained the state of continuous climax to achieve the best suspense effect. Thriller films rely on wonderful suspense factors to design, show strong excitement and extraordinary sense of expectation, and use the twists and turns of characters' fate to satisfy the audience's curiosity. Therefore, in the creation of thriller movies, whether the suspense design is appropriate, whether it can

exceed the audience's psychological expectations, and attract the audience's nervous excitement to participate in it is particularly important (Gao Huimin ,2020).

#### 4. Research Methodology

##### 4.1 Research Design

This study adopts qualitative research methods, and specifically uses text analysis method. In order to better sort out and study the topic of thriller, the author adopts the text analysis method and selects 6 classic thriller films of different subgenres for analysis, in order to understand the narrative structure and audio-visual language of thriller films.

##### 4.2 Population and Sample

The sample for this study is six thriller films of different subgenres. (See Table 4.1)

Table 1: Six different Subgenre of thriller movies in 2000-2023

Year	Name of Film	Subgenre	Award Record
2002	<The Bourne Identity>	Action Thriller	Nominated for Best Action Thriller Film at the 29 <sup>th</sup> Saturn Awards
2003	<Identity>	Psychological Thriller	Nominated for Best Thriller Film at the 30 <sup>th</sup> Saturn Awards
2007	<No Country For Old Men>	Crime Thriller	The 80 <sup>th</sup> Academy Awards Best Picture
2010	<Inception>	Sci-Fi Thriller	The 83rd Academy Awards for Best Cinematography, Best Sound Effects, Best Visual Effects; Best Science Fiction Film at the 37 <sup>th</sup> Saturn Awards etc.
2012	<Argo>	Political Thriller	The 85th Academy Awards for Best Picture, Best Adapted Screenplay and Best Editing
2016	<Train to Busan>	Disaster Thriller	Best Film at the 20 <sup>th</sup> Canadian Fantastic Film Festival

##### 4.3 Data Collection

The data collected in this study came from iQiyi, Google, Baidu, Zhinet, Hownet, Weipu, Zhihu, etc. The researcher watched many thriller films and consulted many references to analyze the narrative structure and audio-visual language of thriller films.

#### **4.4 Data Analysis**

The researcher selected six thriller films of different subgenres, and summarized the narrative structure and audio-visual language of thriller films through text analysis.

This study is divided into two parts:

1) To study the narrative structure of thriller films. Researcher divide the narrative structure of thriller films into two parts. The first part is the narrative elements, which mainly includes the analysis of character, conflict, theme and Setting. The second part is the narrative style, mainly including the analysis of thriller film narrative techniques, such as nonlinear narrative structure and three-act structure.

2) To study the audio-visual language of thriller films. Researcher used cinematography, light and shadow, composition, color, sound and editing to analyze the audio-visual language of six different subgenres of thriller films.

### **5. Research Findings**

#### **5.1 Narrative structure of thriller films**

##### **1) Narrative Element**

According to the narrative structure of the six thriller films, in terms of narrative elements, most thriller films adopt the characterization of binary opposites. In addition to the characterization of the protagonist, the protagonist usually chooses heroes, police officers, innocent victims and other characters. They will use smart and witty means to deal with crises, make plans and find ways to solve problems.

The protagonists usually represent goodness and justice, and their actions are driven by moral and ethical values. The antagonist is usually a character with extremely evil and ruthless traits, who pursues their own selfish interests and does not stop at nothing, the antagonists have excellent intelligence and planning abilities, they are able to orchestrate complex plots against the protagonist, and they usually have some special skill, resource or weapon that gives them an advantage against the protagonist. In addition to the creation of characters, the narrative elements of thriller films are also reflected in the conflict, theme and Settings. Thriller films usually set the conflict between people, between people and themselves, and between people and society. Most of the themes revolve around psychology, political struggles, moral dilemmas, technology and the future, and the struggles of human nature. In the setting of time and place, thriller films will use some limited space to promote the plot, so that the film has a sense of tension and thriller.

##### **2) Narrative Style**

In terms of narrative style, most thriller films adopt the nonlinear narrative structure, integrating narrative techniques such as loop nested structure and causal linear structure, adding new story context on the basis of known story context, and using flashbacks, foreshadowing, multiple reversals and other techniques to create suspense. In addition, a small number of thriller films adopt the classic three-act structure, set the plot in a limited space, enhance the suspense of the film, and form a clear narrative style and a relaxed narrative rhythm.

## 5.2 Audiovisual language of thriller films

According to the audio-visual language of the six thriller films, the thriller films mainly adopt close-up shots, high and low Angle shots, upward shots, handheld motion shots, etc., through these carefully selected cinematography, the director successfully shaped the suspense thriller atmosphere of the film; In terms of light and shadow composition, thriller films mainly use side light, backlight and alternating light and shadow to shape character images, and comprehensively use triangle composition, diagonal composition and mirror composition to shape character relationships. In terms of color, thriller films mainly use cool colors, and then integrate warm colors such as yellow and red to bring the audience a visual feast. In terms of sound, thriller movies use natural sound effects and background music to create a thriller atmosphere, and often use the form of white space and abrupt stop to create an unsettled effect; In terms of editing, most thriller films use a variety of montage techniques to reveal the plot of the film and guide the audience to immerse themselves in the film.

## 6. Discussion

The research results show that the analysis of narrative structure and audiovisual language of thriller films focuses on narrative structure and audiovisual language. Researchers believe that in terms of narrative structure, thriller films mostly use binary opposition to shape characters, set conflicts, and combine nonlinear narrative structure with limited space and flashback. In addition, a small number of thriller films adopt the three-act narrative structure, forming a clean narrative style and a relaxed narrative rhythm. This refers to the explanation by Zhu Lin (2017) that the three-act narrative structure unfolds along the sequence of beginning, development, climax, and end in a time chain, where the dramatic hook that moves the story forward is called a plot point, which is often a turning event. It also refers to the explanation of Xie Xintong and Shao Yulian (2019) that thriller film, as an important branch of film, has a great difference in its narrative structure from other genres. Thriller film mainly adopts nonlinear narrative structure, breaks and touches with a single time dimension, and time becomes an incoherent fragment and is reversed backwards and forward.

In terms of audio-visual language, thriller films arrange different cinematography, comprehensively use a variety of staggered light and shadow, composition, color, sound and montage editing skills to shape the character image and character relationship, create film suspense and create a thriller atmosphere. This refers to the explanation of Xia Yao (2013), the treatment of cinematography in thriller films is not only an important part of the director's artistic creation, but also one of the important modeling means of photography creation. A strong visual effect can be formed by the separate existence of field in the shot, the arrangement of front and back, the combination of paragraphs and the organic use. It also refers to the explanation of Hu Ming (2014) that in film and television creation, montage technique is the key to determining the quality of the works. It not only plays an important role in the structure of the story plot, shaping the character of the film characters, increasing the expression and appeal of the film, but also can mobilize the emotions of the audience watching the film. According to the explanation of Wang Feng (2018), when shooting a thriller film, the selection and design of the

cinematography, the control of the time rhythm, the adjustment of sound factors and the grasp of the color of the picture can create the thriller atmosphere of the film, and then determine the success or failure of the thriller film.

## 7. Suggestion

When studying the narrative structure and audio-visual language of thriller films, the author has many useful research suggestions that can help researchers to delve into this exciting film genre. Here are some suggestions on how to do your research:

1) Select representative film case studies: In order to further study the narrative structure and audio-visual language of thriller films, researchers can choose some classic and representative films as study cases. These films should represent different thriller subgenres, such as action thriller films, psychological thriller films, crime thriller films, political thriller films, science fiction thriller films, disaster thriller films, etc., in order to fully understand the characteristics of the different genres.

2) Analysis of the narrative structure of thriller films: Researchers can start by analyzing the narrative structure of films. Examine the twists and turns of the story, the setting and resolution of suspense, and the interactions between characters to understand how the film builds a tense and engaging storyline.

3) Analysis of audiovisual language in thriller films: Audiovisual language plays a crucial role in thriller films. Researchers can explore in depth how directors use elements such as field of view, light and shadow, composition, color, music, and editing to affect the audience's emotions and viewing experience.

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## Using Problem Based Learning model to Improve problem solving ability of medical students

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### ABSTRACT

The purposes of this research were 1) to use a Problem Based Learning model to improve a problem solving ability of medical students, and 2) to compare students' problem solving ability, before and after the implementation based on the Problem Based Learning model. The sample group included 30 second-year medical students of a college in Weifang, China, in the first semester of the academic year 2023, The research instruments involved 1) four lesson plans based on the Problem Based Learning model, including 12 hours of teaching time, and 2) the Problem Solving ability scoring criteria. The test question is designed to test the 6 sub variables in the dependent variable, including comprehension ability, discriminatory ability, presentation ability, problem solving ability, reflective ability, and communication ability. The data were analyzed by mean ( $\bar{X}$ ), standard deviation (S.D.) and Paired Sample t-test for dependent samples. The results revealed the followings: 1) By using Problem Based Learning model and observing students' learning behavior, it was found that students' Problem-Solving ability has been improved. Using a problem-based learning instructional model, medical students' basic scores on problem-solving ability were 17.28 with an average of 64.00 per cent before the study and 20.41 with an average of 75.59 per cent after the study, with an average difference of 3.13 points. These can be arranged in order of differences in before learning and after learning scores, from highest to lowest are: discriminatory ability (0.97 points), Comprehension ability (0.76 points), reflective ability (0.40 points), communication abilities (0.40 points), problem solving ability (0.40 points) and presentation ability (0.20 points). The scores were higher after learning than before learning. So, after the implementation of Problem Based Learning model, the students' Problem-Solving Ability improved obviously. 2) Using Problem Based Learning model, the Problem solving ability of second-year medical students after class is significantly higher than before class, with statistical significance at the level. 01. The problem solving ability scores of the medical students using the problem-based learning model averaged 17.28 before the study and 20.41 after the study, with an average difference of 3.13 points. The results showed that the problem solving ability of the students after the study was higher than before the study, which was statistically significant at the 0.01 level.

**Keywords:** Problem Based Learning model, Problem solving ability, medical students

## **1. Introduction**

One of the higher-order abilities required of students in the twenty-first century is the ability to solve problems. Cultivating problem-solving ability is the demand of China's quality education reform and the cultivation of creative talents, and this ability is not the ability of students to simply solve problems, but the ability to consider them in a comprehensive manner and to apply what they have learnt to solve some complex problems. Problem solving is a process in which every student should be trained. China's National Programme for Medium- and Long-Term Educational Reform and Development (2010-2020) clearly puts forward: "Promote the diversification of cultivation modes, and endeavor to improve students' problem-solving abilities." Therefore, improving students' problem-solving ability has become the entry point for cultivating creative talents, and it is also the necessary way for China's education and teaching reform to go deeper. The development of medical students' problem-solving ability is a new direction for the development of university education. At present, the ability of medical students to solve problems in clinical practice is not satisfactory. For medical students, when they enter the university after experiencing primary education and secondary education, the content they learn for a long time is refined, filtered, and rich in logical knowledge system, and the exercises they practise are also general exercises with just enough conditions. Such learning and connection can make students in a shorter period of time, master a large amount of knowledge, has the characteristics of high efficiency. However, this traditional education and teaching method will make students' thinking rigid and lack the ability to solve problems when facing clinical problems (Liu et al., 2019). And the lack of talent resources for rehabilitation medicine professionals in China has a huge gap, and the cultivation of medical talents has a long way to go. In summary, educational institutions have the responsibility to promote and support the cultivation of medical students' problem-solving ability, while the traditional teaching mode has limitations in the teaching of exercise therapy courses. The traditional teaching model is not student-centred, which seriously restricts the cultivation of students' problem-solving ability and makes it difficult to achieve the expected results. Chinese scholars suggest the need to find an appropriate teaching mode to enhance the problem-solving ability of medical students in the study of improving assessment for medical students based on the Programme for International Student Assessment (PISA). Therefore, the researchers studied and developed a "problem-based learning" model that promotes problem solving for medical students for improving their problem solving ability.

## **2. Research Objective**

- (1) To use Problem Based Learning model to improve problem solving ability of medical students.
- (2) To compare students' problem solving ability, before and after the implementation base on the Problem Based Learning model.

### 3. Literature Review

#### 3.1 Theory, Concept and Related Research

(1) Problem Based Learning model: Barrows, & Tamblyn (1980) states that the Problem Based Learning model is a model of education. The curriculum is problem-focused, with problems carefully selected and designed, while the problems need to be challenging. There are five steps, which are: 1) organizing group work, 2) creating a situation to raise a problem, 3) cooperative learning to explore the problem, 4) problem solving to share and exchange, and 5) summarizing and reflecting to evaluate the feedback. Liu (2001) believes that through problem-based learning, students can acquire knowledge related to problems. Yang (2005) pointed out that the Problem Based Learning model is a collaborative group effort in which learners work together to solve real problems in complex, meaningful situations, and in the process acquire scientific knowledge and develop problem-solving, independent learning and lifelong learning skills. Savery (2015) pointed out that Problem Based Learning model is a practical solution for students to solve problems based on specific problems and theory after combining theory and practice. To sum up, Problem Based Learning model is a teaching mode that takes teachers as the guide, puts students at the center of teaching and learning, and guides students to collect information, discover problems, and carry out group cooperation and investigation, and ultimately achieve the solution of the problem. Many scholars have different views on the implementation process of Problem Based Learning model. In the process of implementing Problem Based Learning model, the general learning process of Problem Based Learning model involves the following steps: "grouping, guiding, analyzing, solving and evaluating".

(2) Problem solving ability: Warner (2002) suggested that problem solving competence is "the ability to create the best solution to a problem at work". The 2003 PISA testing framework's understanding of the meaning of problem-solving ability focuses on students' integrated use of knowledge gained in reading, mathematics, and science to solve real problems. Sternberg & Frensch (2014) divided the problem solving process into six parts: identifying the problem, defining the problem, forming a strategy, organizing information, allocating resources, and monitoring and evaluation. Ma (2020) continues to sort out the PISA2003 evaluation framework based on the theory of scholar Yang Bin, which is divided into six sub-competencies: 1) identifying a problem, 2) describing a problem, 3) using tools to explain a problem, 4) being able to apply methods and strategies to solve a problem, 5) communicating in a reflective way, and 6) speaking about experiences and learning methods. In summary, a more comprehensive meaning of students' problem solving ability should be proposed with due consideration of the factors affecting the development of problem solving ability. The delineation of problem-solving ability can be integrated by referring to the arguments of scholars and the PISA2003 assessment framework.

(3) Medical course: Ministry of Education of the People's Republic of China (2019) Published Documents, medical course mainly refers to the rehabilitation medicine course, including the professional basic course, professional core course and professional extension course. The professional core courses are generally 7 courses. These include: rehabilitation assessment techniques, exercise therapy, physical factor therapy

techniques, occupational therapy techniques, speech therapy techniques, Chinese medicine rehabilitation techniques, and rehabilitation of common diseases.

### 3.2 Research Framework

The National Programme for Medium- and Long-term Educational Reform and Development (Ministry of Education of China, 2010) proposes the need to enhance students' problem-solving abilities. Using the medical course "Exercise Therapy" as the course of study, we will deeply explore the mode and method of cultivating students' problem-solving ability in the teaching of the discipline, design the content of the problem-based learning mode and problem-solving ability according to the policy of the Professional Teaching Standards for Vocational Schools of Higher Learning (Ministry of Education of the People's Republic of China, 2019), prepare the teaching plan, design the teaching process of the problem-based learning mode, and form the lesson plan based on the problem-based learning mode, which can be used to enhance the problem-solving ability of medical students' problem-solving ability. The research concept framework is as follows:

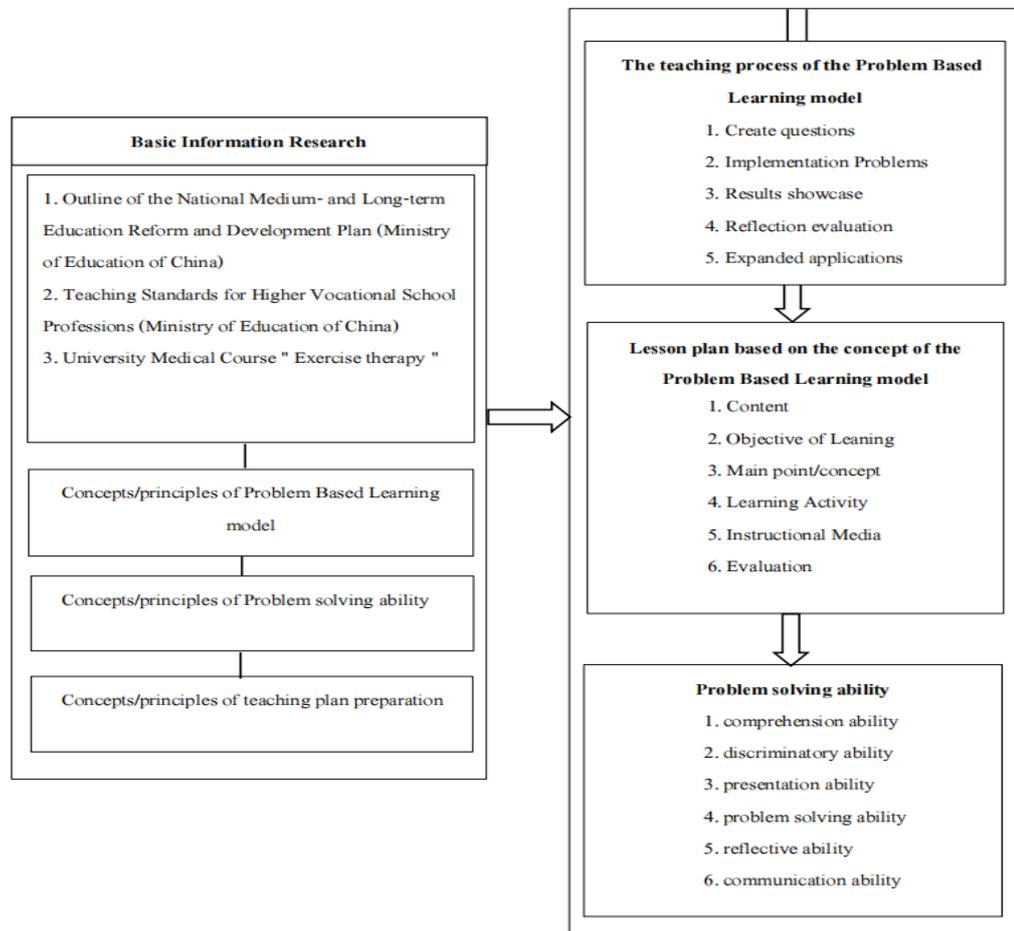


Figure 1 Research Framework

### 3.3 Research Hypotheses

After the implementation of Problem based learning model, the students' Problem-Solving Ability improved explicitly.

## 4. Research Methodology

Use the Problem Based Learning model to improve. The research using experimental research methodology have the following procedures.

### 4.1 Research Design

The research "Using Problem Based Learning model to Improve problem solving ability of medical students" aims to improve the Problem-Solving ability of medical students by using the Problem Based Learning model, and compare the Problem-Solving ability of students before and after class when using the Problem Based Learning method. Before and after teaching test: This research is experimental research. One Group Pretest – Posttest Design was used with the following experimental design:

Table 1 Experimental design

Group	Pretest	Experimental	Posttest
E	T <sub>1</sub>	X	T <sub>2</sub>

The meaning of the symbols used in the experimental design.

E	means	Random Sampling
X	means	Experimental
T <sub>1</sub>	means	Pretest
T <sub>2</sub>	means	Posttest

### 4.2 Population and Sample

#### Population

In the first semester of the 2023 academic year, there are 150 medical students in the second year of medical specialty in a college in Weifang, China, with 5 classes and 30 students in each class.

#### The Sample Group

One class out of 5 classes was taken as a sample by class based on the principle of randomness. One of the 5 classes of Year 2 of the first semester of the academic year 2023 in the institution was randomly selected by random whole cluster sampling, which was class 3 with 30 students.

### 4.3 Research Instrument

Using Problem Based Learning model to Improve problem solving ability of medical students. The research Instruments is as follows:

1. Four lesson plans according to Problem Based Learning model, including 12 hours of teaching time.

2. Problem Solving Ability Test. Under the background and assessment framework of the Programme for International Student Assessment (PISA), the researcher explored the structure of the PISA 2003 Problem Solving Ability (PISA2003), and designed a test of students' problem solving ability in the light of the current situation of education in China. Problem solving ability consists of 6 sub-competencies that are tested separately: 1) comprehension ability, 2) discriminatory ability, 3) presentation ability, 4) problem solving ability, 5) reflective ability, 6) communication ability.

#### **4.4 Data Collection**

The data were collected as follows:

1. Pre-experimental phase: 1) Organize a briefing session before the start of the experiment to inform students about the learning objectives and evaluation methods, as well as the benefits of taking part in aptitude tests and learning activities during the experiment. 2) Conduct a pre-test (Pre-test) on second-year medical students at a university in Weifang, China, taking second-year students from the first semester of the academic year 2023, a total of 30 students, as the sample group, and checking the records of the score in order to analyze the data.

2. Experimental phase: The phase in which the researcher teaches the sample group according to the teaching plan he developed. The total teaching time was 12 hours, excluding the pre-test and post-test.

3. Post-experimental phase: After teaching all the contents, the students in the sample group were tested on their ability (post-test). The researchers checked and scored the test according to the developed scoring criteria and the scores were reviewed and submitted for further data analysis.

#### **4.5 Data Analysis**

1. Analyze and validate the effectiveness of the course plan, and self guide the consistency index of the Problem Based Learning model learning ability scoring criteria as the consideration criterion (objective consistency index: IOC).

2. Based on the Problem Based Learning model, evaluate students' learning ability before and after the implementation of Problem Solving ability, and analyze the bias and t-test of statistical data related samples through means and standards from experiments. In this research, the researcher has synthesized the creative problem-solving abilities that will be promoted in students. This ability can be classified into 6 sub-abilities: 1) comprehension ability, 2) discriminatory ability, 3) presentation ability, 4) problem solving ability, 5) reflective ability, 6) communication ability.

Taking 30 second-year medical students of a college in Weifang, China, as research objects, the "Problem Based Learning model" was adopted to observe and record the students' behavioural performance in each lesson during the five teaching sessions of "Create questions, Implementation Problems, Results showcase, 4 Reflection evaluation, 5) Expanded applications". In the "Create questions, Implementation Problems, Results showcase, Reflection evaluation, expanded applications" five teaching sessions, the students' behaviours were

observed and recorded in each session. The changes in students' behaviours indicated that students' learning awareness, learning strategies, learning activities, learning evaluation and problem solving ability were gradually improved throughout the learning process. Quantitative data were analysed through inferential statistics; Then calculate the different score of problem solving ability before and after using Problem Based Learning model were analysed through t-test for dependent.

## 5. Research Findings

### 5.1 Results of using the Problem Based Learning model to improve problem-solving ability

The objective of this study is to improve the problem solving ability of medical students using the Problem Based Learning model. Based on the Problem-Based Learning model approach further improves students' problem-solving ability, and in particular, significantly improves their discriminatory ability. The task sheets reflect an upward trend in students' problem-solving ability as instruction continues. The results of problem solving ability scores before and after applying the Problem Based Learning model in the exercise therapy course are detailed in Table 2.

Table 2 Using Problem Based Learning model to Improve problem solving ability of medical students

n=30

Problem Solving Ability	Full Scores (27)	Pre-test		Post-test		D
		$\bar{X}$	Percentage (100%)	$\bar{X}$	Percentage (100%)	
1.comprehension ability	6	4.07	67.83	4.83	80.50	0.76
2.discriminatory ability	9	5.70	63.33	6.67	74.11	0.97
3.presentation ability	3	1.87	62.33	2.07	69.00	0.20
4.problem solving ability	3	1.87	62.33	2.27	75.67	0.40
5.reflective ability	3	1.80	60.00	2.20	73.33	0.40
6.communication abilities	3	1.97	65.67	2.37	79.00	0.40
total		28.17	60.64	41.20	75.59	3.13

From Table 2, it can be seen that the basic score of problem solving ability of medical students using Problem Based Learning model of teaching are 17.28 points which is 64.00 percent on average before learning and 20.41 points which is 75.59 percent on average after learning with a difference of 3.13 points on average. These can be arranged in order of differences in before learning and after learning scores, from highest to lowest are: discriminatory ability (0.97 points), Comprehension ability (0.76 points), reflective ability (0.40 points), communication abilities (0.40 points), problem solving ability (0.40 points) and presentation ability (0.20 points) Higher score after learning than before learning So, after the implementation of Problem Based Learning model, the students' Problem-Solving Ability improved obviously.

5.2 Comparative results of problem-solving ability of medical students implementing the Problem Based Learning model.

Comparison of medical students' problem solving ability before and after adopting Problem Based Learning model. Compared with traditional teaching, Problem Solving ability teaching based on the Problem Based Learning model is more helpful in enhancing students' problem-solving ability. Thereseachers used the problem solving ability scores before and after learning to analyze the data using mean statistics, standard deviation and t-test. The results of data analysis are shown in Table 3.

Table 3 Results of comparing students' Problem-Solving Ability of medical students before and after using Problem Based Learning model

		N	Full Point	$\bar{X}$	.SD	T	P
Total score	Pre- test	30	27	17.28	4.83	9.771	0.009**
	Post-test	30	27	20.41	4.10		

Statistically significant at level. .01(p <.01)

From Table 3, it can be seen that the problem solving ability scores of the medical students who used Problem Based Learning model averaged 17.28 before the study and 20.41 after the study, with an average difference of 3.13 points. The results show that the problem solving ability of the students after the study is higher than that before the study, which is statistically significant at the .01 level. This is consistent with the research hypothesis.

## 6. Discussion

(1) The Problem Based Learning model improves students' problem-solving in an exercise therapy programme. Students' problem-solving ability was well understood and learnt in practice as they received learning and training according to the steps of the Problem Based Learning model during their study of joint training, balance training, plyometrics and respiratory training. The study of many related literatures and the research on the problem-based learning model were summarized into five steps to develop a lesson plan: 1) Create questions, 2) Implement Problems, 3) Results showcase, 4) Reflection evaluation, 5) Expanded applications. The assessment test concluded that students have problem-solving abilities in the Problem Based Learning model in six areas: 1) comprehension ability, 2) discriminatory ability, 3) presentation ability, 4) problem solving ability, 5) reflective ability, and 6) communication ability. among these, the Problem Based Learning model is necessary to improve the problem solving ability of medical students, and this teaching model can enhance students' interest, which is consistent with Martí, et al. (2006). The findings are consistent with the fact that problem-based learning as a more actionable approach is more convenient for teachers to teach in the classroom and master the pace of teaching; for students, it raises their awareness of interest in the subject, stimulates motivation and initiative in learning, and improves their problem-solving ability. The Problem Based Learning model advocates a student-

oriented perspective that guides students to make full use of the existing knowledge structure, to mobilize relevant learning resources to find new solutions to relevant problems, in line with Al-Salihi & Alobaidi (2018) study, develops instructional learning modules through a series of learning involving problem-based learning. Problem-based learning is important to student learning as it helps to guide students to get more opportunities to practice and consolidate what they have learnt and develop problem solving ability. It also corroborates Lawal et al. (2021) that the Problem Based Learning model has particularly critical benefits in medical education and training, and that it has a greater impact on students' preparation for autonomous clinical practice. Problem-based learning in developing students' critical thinking and decision-making skills makes it a useful pedagogical implementation in the medical curriculum.

(2) Comparison of students' problem-solving ability before and after learning using a problem-based learning model. Findings: it can be seen that the problem solving ability scores of the medical students who used Problem Based Learning model averaged 17.28 before the study and 20.41 after the study, with an average difference of 3.13 points. The results show that the problem solving ability of the students after the study is higher than that before the study, which is statistically significant at the .01 level. This is consistent with the research hypothesis.

## **7. Suggestion**

(1) Research on teaching modes to enhance students' problem-solving ability. Problem Based Learning model is used in combination with other teaching forms to cultivate students' problem-solving ability, such as combining the theory of collaborative learning, or flipping the classroom teaching mode, etc., to improve the problem-solving ability of medical students.

(2) It should expand disciplinary applications. The problem-based learning model constructed in this study focuses on the pedagogical application step of cultivating students' problem-solving ability, but the model has only been validated and modified in the exercise therapy course, and it can be expanded to be applied in other medical courses, and further validated and modified in a wider range of disciplines.

(3) The Problem Based Learning model should be expanded to include other competencies. The Problem-Based Learning model summarized and proposed in this study has been proved to be effective through the testing of teaching practice, and can also be used for the enhancement of other competencies, such as critical thinking ability, communication ability, and so on.

## **8. Acknowledgement**

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## Using 5E Inquiry based teaching to improve experimental design ability for middle school students

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### ABSTRACT

The objectives of this study were 1) to improve middle school students' experimental design ability using 5E inquiry-based instruction and 2) to compare students' experimental design ability before and after the implementation of 5E inquiry-based instruction. The simple group of this study consisted of 30 samples from a middle school in Weifang, China. The research tools included 1) lesson plans and 2) experimental design ability test. The test questions were designed to test four sub-variables in the dependent variable, including the test questions were designed to test three sub-variables in the dependent variable, including the ability to specify the purpose of an experiment, the ability to state the relationship of variables, the ability to describe the experimental procedure, the ability to express the expected results of an experiment. The data were analyzed by mean ( $\bar{X}$ ), standard deviation (S.D.) and Paired Sample t-test for dependent samples. The results revealed the followings: 1. Through the use of 5E Inquiry based teaching and observation of students' learning behaviors, it is found that students' experimental design ability has been improved. The experimental design ability competence scores of the secondary school students before and after using 5E Inquiry based instruction averaged 16.03 on the pre-test and 19.27 on the post-study test, with a mean difference of 3.24 points. The post-learning scores were found to be higher than the pre-learning scores. 2. Using 5E Inquiry based teaching, the experimental design ability of middle school students after class is significantly higher than before class, with statistical significance at the level .01. the experimental design ability after class is higher than before class.  $P < .01$  indicates statistical significance at the 0.01 level. By implementing the experimental design ability on students, their experimental design ability after class is significantly higher than that before class. This is consistent with the research hypothesis.

**Keywords:** 5E Inquiry based Teaching, Experimental Design Ability, middle school student

### 1. Introduction

In 2010, China's Ministry of Education issued the Outline of the National Medium- and Long-Term Educational Reform and Development Plan (2010-2020), which pointed out the need to reform teaching methods and content, advocate participatory and inquiry-based teaching, focus on giving full play to the subjective initiative of students' learning, and vigorously promote the all-round development of human beings. In response

to the call of the new era, in 2020, the Ministry of Education promulgated the General High School Biology Curriculum Standards (2017 Edition Revised in 2020), in the implementation of the recommendations, it is clearly pointed out that experimental teaching is an important support for students to achieve the core literacy of the discipline of biology, and it is necessary to strengthen and improve the experimental teaching of biology. The experimental design is the key link of experimental teaching.

Currently, the cultivation of experimental design skills in high school is not satisfactory. The lack of experimental courses has always been a problem in our high school biology teaching (Mi & Hyun, 2013). High school biology teaching often does not emphasize laboratory courses and lacks relevant laboratory equipment. Some high schools do not conduct laboratory courses or have fewer hours of laboratory courses, and the vividness and effectiveness of biology teaching will be greatly reduced.

The application of traditional teaching mode in high school laboratory teaching has certain limitations. At present, in our classroom teaching process, teachers' classroom questions and dialogues are put forward to solve problems, and do not have in-depth excavation of the problem, not to mention in-depth study of the nature of the problem, still staying in the traditional questioning teaching methods. cannot stimulate students to think about problems in class and guide students to understand the classroom content. (Nina & Cigdem, 2016)

5E Inquiry based teaching provides a path for high school laboratory teaching. Ni (2022) pointed out that the 5E teaching model is an important educational model in the field of science education, and its purpose is to help students realize conceptual transformation and scientific conceptual construction. This teaching model has been applied to the overall curriculum design of Biological Science Curriculum Study (Abbreviation BSCS) since the late 1980s and has been highly recognized. Applying the five components of 5E Inquiry based teaching to high school biology teaching is conducive to improving students' learning motivation and experimental design ability.

5E Inquiry based teaching has a positive impact on senior high school students' further improvement of biological scientific thinking, can mobilize students' enthusiasm for classroom learning to a certain extent, effectively promote the process of active interaction between teachers and students, and improve senior high school students' biological scientific thinking, so it is worth applying in senior high school biology classroom teaching or classroom learning to a certain extent, effectively promote the process of active interaction between teachers and students, and improve senior high school students' biological scientific thinking, so it is worth applying in senior high school biology classroom teaching.

## **2. Research Objective**

(1) To using 5E Inquiry based teaching to improve the experimental design ability for middle school students.

(2) To compare students' experimental design ability, before and after the implementation is 5E Inquiry based teaching.

### **3. Literature Review**

#### **3.1 Theory, Concept and Related Research**

Using 5E Inquiry based teaching to improve experimental design ability for middle school students, the following literatures were studied.

##### **5E Inquiry based teaching**

In 1989, BSCS revised and improved the Atkin-Karplus learning loop model, and proposed a 5E teaching model based on constructionist theory and concept transformation theory. This model includes five links, namely, attraction, exploration, interpretation, migration and evaluation. According to Ong et al. (2018), the 5E teaching model consists of the following five stages: participation, exploration, explanation, refinement, and evaluation. each stage has a specific pedagogical function that contributes to the coherence of the teacher's teaching and the learners' formation of scientific and technological knowledge. Zhu (2022) pointed out that the 5E Inquiry based teaching model consists of five parts: introduction, exploration, interpretation, transfer and evaluation. It is student-centered and flexible. It can improve students' enthusiasm for learning, help students understand important concepts and are of great benefit to junior high school biology teachers to cultivate students' structure and function view.

5E Inquiry based teaching is an important model of participatory, inquiry-based teaching and learning that is student-centered and consists of five components: engagement, exploration, expansion, elaboration and Evaluation.

##### **Experimental design ability**

Dasgupta, Anderson & Pelaez (2014) believed that the competencies required for a competent experimental design include identifying the problem; generating the hypothesis; planning the experimental procedure, including treatment, control, and outcome variables; and interpreting the study results to make inferences. Du (2019) pointed out in the strategy of improving students' experimental design ability that experimental design refers to the planning of the whole process of the experiment, including putting forward questions, guessing hypotheses, designing experiments and customizing plans, conducting experiments and collecting evidence, analyzing and demonstrating, evaluating, communicating and cooperating, etc.

Experimental design ability is an important part of scientific research, which covers a series of links from understanding the purpose of the experiment, determining the experimental variables to choosing an appropriate experimental design, developing detailed experimental steps, choosing appropriate statistical analysis methods, interpreting the results of the experiment to writing the experimental report.

##### **Middle school program**

China's Ministry of Education mentions in the Compulsory Education Biology Curriculum Standards (2022) that general high schools offer national courses in language, mathematics, foreign languages, ideology and politics, history, geography, physics, chemistry, biology, technology (including information technology and general technology), art (or music and fine arts), physical education and health subjects, and comprehensive practical activities and labor, as well as school-based courses. China's Ministry of Education's "In the General

High School Biology Curriculum Standards (2017 Edition, 2020 Revision)" (2020) mentions that the General High School Curriculum Program stipulates that the high school biology curriculum offers compulsory, optional compulsory and elective courses.

### 3.2 Research Framework

Outline of the National Medium- and Long-Term Educational Reform and Development Plan (Ministry of Education of China, 2010) points out that we should adhere to the principles of moral education first and competence first, reform the teaching methods and contents, advocate participatory and inquiry teaching, and focus on giving full play to the subjective initiative of students in learning. Taking the secondary school biology curriculum as the research carrier, this study explores in-depth the mode and method of cultivating students' experimental design ability in teaching and learning, and designs the teaching content, prepares the teaching plan, and designs the teaching process based on the enhancement of students' experimental design ability according to the 5 steps of 5E inquiry-based teaching, which is used to improve the experimental design ability of secondary school students. The conceptual framework of the study is as follows:

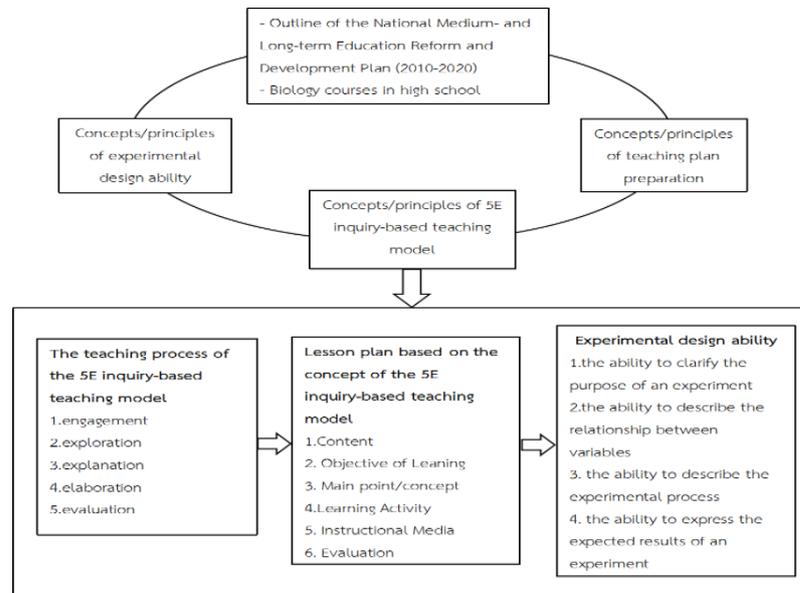


Figure 1 Research Framework

### 3.3 Research Hypotheses

After the implementation based on 5E Inquiry based teaching, the students' experimental design ability has been improved explicitly.

## 4. Research Methodology

The experimental purpose of this study was using 5E Inquiry based teaching to improve the experimental design ability for middle school students. The research using experimental research methodology has the following procedures.

#### 4.1 Research Design

The research "using 5E Inquiry based teaching to improve experimental design ability for middle school students " aims to improve experimental design ability of middle school students by 5E Inquiry based teaching, and compare the experimental design ability of students before and after class when using 5E Inquiry based teaching. Before and after teaching test: This research is experimental research. One Group Pretest – Posttest Design was used with the following experimental design:

Table 1 Experimental design

Group	Pretest	Experimental	Posttest
E	T <sub>1</sub>	X	T <sub>2</sub>

#### 4.2 Population and Sample

##### Population

There are 120 students in the first grade of the senior middle school of a middle school in Weifang, China,, divided into 4 classes with 30 students in each class., in the first semester of the 2023 academic year.

##### The Sample Group

According to the principle of randomization, 1 class out of 4 classes was taken as the class sample. Through random cluster sampling, 30 students from Class 2, Grade 1 of high school in the first semester of the 2023 academic year in a middle school in Weifang were selected as the sample.

#### 4.3 Research Instrument

Using 5E Inquiry based teaching to improve the experimental design ability for middle school students. The research Instruments is as follows:

1. Lesson plan according to the 5E Inquiry based teaching: The teaching content was divided into four parts, each part corresponding to a teaching plan, a total of four teaching plans, respectively, in accordance with the teaching steps of 5E inquiry-based teaching.

2. Experimental design ability Test: In this research, the experimental design ability was divided into four sub-competencies, including the ability to specify the purpose of the experiment, the ability to explain the relationship between variables, the ability to describe the experimental process, and the ability to express the expected results of the experiment. The researcher designed his own test questions for these four sub-competencies and used them to test students' experimental design ability after passing the assessment by experts.

#### 4.4 Data Collection

The data were collected as follows:

1. Pre-experiment phase: 1) Organize an explanation meeting before the experiment to help students understand the evaluation methods of learning objectives, as well as the benefits of participating in ability tests and learning activities during the experiment. 2) Conduct a pre-test for sophomore medical students in the

first semester of the 2023 academic year, with a total of 30 students as a sample group, and check the score records for data analysis.

2. Experimental phase: The experimental stage is the stage where the sample group learns using the activity plan developed by the researchers. The stage of learning in the activity plan. The teaching time is a total of 12 hours, excluding pre-test and post-test time.

3. Post-experiment phase: After teaching all the content, a group of sampled students will be tested for their abilities. After learning, conduct a test (post-test), and then check and score according to the scoring standards set by the researchers. After the scores have been reviewed and merged, further data analysis will be submitted.

#### 4.5 Data Analysis

In this study, a lesson plan was developed according to the 5 steps of 5E Inquiry based teaching and 30 middle school students from a middle school in Weifang, China was taught according to the lesson plan to obtain the pre-test scores and post-test scores of experimental design ability. These data were coded, counted, and statistically processed using t-test for mean, standard deviation, and significant difference. The data were statistically analyzed using paired samples t-test analysis. It compares whether the means of two independent groups or variables are different. This was used to compare the level of students' experimental design ability before and after using the 5E Inquiry based teaching.

### 5. Research Findings

This study concludes that the strategy of teaching experimental design ability based on 5E Inquiry based teaching is reasonable and effective through the experimental design and the following conclusions are drawn:

Table 2 Experimental design ability score between before and after learning

n= 30

Experimental design ability	Full	Pre-test		Post-test		D
	Scores (24)	$\bar{X}$	Percentage (100%)	$\bar{X}$	Percentage (100%)	
1.the ability to specify the purpose of an experiment	6	4.10	68.33	5.03	83.83	0.93
2.the ability to state the relationship of variables	6	4.03	67.17	4.83	80.50	0.80
3.the ability to describe the experimental procedure	6	4.17	69.5	4.73	78.83	0.56
4.the ability to express the expected results of an experiment	6	3.73	62.17	4.67	77.83	0.94
total		16.03	66.79	19.27	80.29	3.24

From Table 2, it can be seen that changes in the four sub-competencies of the experimental design competencies of middle school students using 5E inquiry-based instruction: 1) the ability to clarify the purpose of the experiment : the average score before learning was 4.10, and the average score after learning was 5.03, with an average difference of 0.93; 2) the ability to explain the relationship of variables : the average score before learning was 4.03, and the average score after learning was 4.83, with an average difference of 0.80; 3) the ability to describe the experimental process : the average score before learning was 4.17 points before learning and 4.73 points after learning, with an average difference of 0.56 points; 4) the ability to express the expected results of the experiment: the average score before learning was 3.73 points, and the average score after learning was 4.67 points, with an average difference of 0.94 points, and the scores of all the items after learning were higher than those before learning. Therefore, using 5E inquiry-based teaching can improve junior high school students' experimental design ability and achieve the research objectives.

Table 3 the comparison of experimental design ability score between before and after learning.

		N	Full Point	$\bar{X}$	SD.	T	P
Total score	Pre-test	30	24	16.03	3.89	11.134	0.001**
	After-test	30	24	19.27	3.08		

\*\*Statistically significant at level. 01(p <.01)

From Table 3, it can be seen that the scores of students' experimental design ability after learning are higher than before learning, with statistical significance at the 0.01 level; The students' ability to design experiments using the 5E Inquiry based teaching scored an average of 16.03 points before learning and 19.27 points after learning, with an average difference of 3.24 points. The results showed that after using 5E Inquiry based teaching, the students' experimental design ability increased compared to before. The results are statistically significant.

## 6. Discussion

(1) Using the 5E Inquiry based teaching to improve students' experimental design ability. Researchers have studied many relevant literature and research on Inquiry based teaching, and have summarized it into five steps for developing lesson plans based on the 5E Inquiry based teaching methods of middle school students. Data analysis involves three experts evaluating the quality of lesson plans based on exploratory teaching methods, and the results are presented by experts on the quality of lesson plans. Overall, the suitability of research objectives is the most appropriate. This is because the developed learning plan is consistent with the concept of 5E Inquiry based teaching, and the developed curriculum plan includes key elements of the curriculum plan. Learn complete and relevant content clearly and comprehensively. The established activities emphasize the practical learning, practical thinking, and practical abilities of learners in experimental design. In terms of

measurement and evaluation, it is determined to be an assessment based on actual situations, measured according to learning objectives, and determined whether the workpiece and workload are suitable based on learning objectives, which is consistent with the research of Qiu (2022) and Zhang (2022). They pointed out that combining the 5E Inquiry based teaching model with the requirements of practical activities in the teaching process in the basic concept of the new curriculum standard; we should carry out practical research on the biological activity class, and explore the relevance between the activity class and the 5E teaching model. The students' core literacy level has been greatly improved through the learning in the high school biological activity class under the 5E teaching mode. The results of student self-evaluation and mutual evaluation show that students' interest in biology learning is significantly improved through the learning of biological activity class under the 5E teaching mode. Through practical teaching case studies of the 5E Inquiry based teaching, the full application of the 5E Inquiry based teaching in practical teaching has achieved student learning results. In addition, Singh (2020) emphasized that exploratory learning is another criterion for effective knowledge transfer. She pointed out that although people might expect different things/practices when they referred to inquiry-based learning, there were decisive Characteristics that required being nearby, including an integrated prospectus across regulation, a problem-based teaching room, and deliberation to skills enlargement. The research results of Luan (2022) indicate that the 5E Inquiry based teaching reflects students' subjectivity in the teaching process. The teaching process of exploratory teaching method generally includes five steps. With the continuous development of the new curriculum reform, the theoretical and practical research of the teaching model has also shown a trend of prosperity. In order to meet the requirements of the new era for talent cultivation, the inquiry teaching model advocating active independent learning, cooperative learning and inquiry learning has been placed in an important position. There is further elaboration on the development and implementation of 5E Inquiry based teaching in different literature.

(2) Comparison of students' experimental design abilities before and after learning using 5E Inquiry based teaching. The results showed that the average score before learning was 16.03 points, and the average score after learning was 19.27 points, with an average difference of 3.24 points. The results showed that the experimental design ability of 30 students after learning was higher than that before learning, with statistical significance at the 0.01 level, which is consistent with the hypothesis. which is consistent with the hypothesis. 5E Inquiry based teaching lies in its student-centered approach, which stimulates students' interest through practical experimental design skills, enhances each student's participation, and promotes the development of their comprehensive abilities. This is consistent with Du (2019). He pointed out in the strategy of improving students' experimental design ability that experimental design refers to the planning of the whole process of the experiment, including putting forward questions, guessing hypotheses, designing experiments and customizing plans, conducting experiments and collecting evidence, analyzing and demonstrating, evaluating, communicating and cooperating, etc. The 5E Inquiry based teaching is a teaching method that focuses on students' independent exploration, which helps to cultivate students' experimental design ability to the maximum extent possible. Through the 5E Inquiry based teaching, students' experimental design ability has been significantly improved.

The results indicate that the 5E Inquiry based teaching has a positive impact on students' success, and selecting teaching methods that are suitable for students' personal interests and abilities is very important.

## 7. Suggestion

(1) In this study, only 5E inquiry-based teaching was used to improve students' experimental design ability, and other teaching methods or teaching modes can be further considered to improve students' experimental design ability, or a combination of teaching methods or teaching modes can be combined to improve students' experimental design ability, such as: flipped classroom, group cooperative learning, PBL teaching method, etc.

(2) This study improved students' experimental design ability through 5E inquiry-based teaching, and it has been verified to be effective, but students' abilities are also multi-faceted, so we can consider using 5E inquiry-based teaching to improve students' abilities in other areas, such as critical thinking ability, problem solving ability, innovative thinking ability, etc., which will help students' comprehensive ability development.

(3) This study uses the secondary school biology curriculum as a vehicle to use 5E inquiry-based teaching to improve students' experimental design skills, and can consider applying the 5E inquiry-based teaching method to other secondary school curricula, or even to a wider range of disciplines, so as to develop a unique teaching style.

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## **Using Problem Based Learning Method to Improve Creative Problem-Solving Ability of Undergraduate Students**

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### **ABSTRACT**

The objective of this research were 1) to using a problem based learning method to improve a creative problem-solving ability of undergraduate students and 2) to compare students' Creative Problem-Solving ability before and after the implementation based on a problem based learning method. The sample group included 30 undergraduate students from Vocational and Technical College, Anji City, China, in the first semester of the academic year 2023. The research instruments involved 1) four lesson plans based on a problem based learning method, including 16 hours of teaching time and 2) a creative problem-solving ability test. The test question is designed to test the three sub variables in the dependent variable, including 1) understanding the problem (discovering confusion, collecting information, generating problems), 2) creative conceptualization (discovering ideas), 3) action plan (finding answers, seeking acceptance). The data were analyzed by mean ( $\bar{X}$ ), standard deviation (S.D.) and paired sample t-test for dependent samples. The results revealed the followings: 1) By using Problem Based Learning method and observing students' learning behavior, it was found that students' creative problem-solving ability has been improved. The creative problem-solving ability scores before and after using problem based learning method of the undergraduate students, the average score for the pre-test was 6.03, while the average score for the post-test after learning was 14.96, and the mean difference was 8.93. The after-learning score was found to be higher than the before-learning score. 2) Using Problem Based Learning method, the creative problem-solving ability of students after class is significantly higher than before class, with statistical significance at the level .01 the students' creative problem-solving ability after class is higher than before class and  $P < .01$  indicates statistical significance at the .01 level. By implementing the problem based learning method

on students, their creative problem-solving ability after class is significantly higher than that before class. This is consistent with the research hypothesis.

**Keywords:** Problem Based Learning Method, Creative Problem- Solving Ability, Undergraduate Students

## 1. Introduction

The National Vocational Education Reform Implementation Program issued by the State on January 24, 2019, proposes "concrete measures to further improve vocational education in the new era, raise the level of development of secondary vocational education, and build a national standard for vocational education," "improve standards related to education and teaching, pay close attention to teaching and teachers, and cultivate and pass on the spirit of craftsmanship". The rapid advancement of smart education, cultivating students' higher-order thinking has become the core content of education. Define higher-order thinking as a psychological activity or cognitive ability that occurs at a higher cognitive level. During the "14th Five-Year Plan" period, the rapid development of the national economy ushered in a critical period of industrial structure upgrading and transformation. The transformation and upgrading of industrial structure means that more creative talents and adaptable technical and skilled talents are needed. Therefore, developing various abilities of students is important including a creativity and creative problem-solving ability of students. (Zhixia and others, 2014).

Creative problem-solving ability encourages exploring open-ended solutions. It also focuses on developing new perspectives and fostering creativity in the workplace. Its benefits include: finding creative solutions to complex problems: user research can insufficiently illustrate a situation's complexity. While other innovation processes rely on this information, creative problem-solving can yield solutions without it. Adapting to change: business is constantly changing, and business leaders need to adapt. Creative problem-solving helps overcome unforeseen challenges and find solutions to unconventional problems. Fueling innovation and growth: In addition to solutions, creative problem-solving can spark innovative ideas that drive company growth. These ideas can lead to new product lines, services, or a modified operations structure that improves efficiency. (Yonwilad, Wannatida, and others, 2023).

The popularization and development of the Problem Based Learning method, it is being applied in more and more fields. The problem-based learning method provides a necessary way to improve students' creative problem-solving ability. The main purpose of implementing the problem-based learning method is to cultivate students' problem-solving ability and communication and coordination ability, and to exercise teamwork and organizational skills in practical operation. (Lian Lian, 2013).

Therefore, the researcher is interested in using problem-based learning method to organize the teaching process to improve a creative problem-solving ability for undergraduate students to make progress and be able to use it more efficiently.

## **2. Research Objective**

(1) To Using Problem Based Learning method to improve Creative Problem-Solving Abilities of undergraduate students.

(2) To compare students' Creative Problem-Solving Ability , before and after the implementation based on the Problem Based Learning method.

## **3. Theory, Concept and Related Research**

This title research using a problem based learning method to improve a creative problem-solving ability of undergraduate students, the following literatures were studied, the details are as follows:

### **3.1 Problem Based Learning method**

This study argues that in problem-based learning, students' learning process should be a continuous process of identifying, analysing and solving problems. Lin (2019) believes that from the perspective of problem composition and teaching methods, the PBL model is an experiential learning process aimed at exploring and solving complex and real problems. The teaching and learning activities in this study will be based on the five components of the problem-based learning process proposed by Barrows & Mayers (1993): 1) Set up study groups, 2) Create a problem, 3) Carry out activities, 4) Presentation of achievements, 5) Reflection after solving the problem. Saqr (2019) stated that social constructivists view learning as the active construction of knowledge through social interaction and dialogue among learners. Xin & Wei.(2023) believe that Designing a learning process based on questions process, which is a conceptual approach that is common to all models in PBL. Problem based learning is a method in which the teacher sets up problems in the course, and through the problems or situations, induces students to think and establish learning objectives.

### **3.2 Creative Problem-Solving ability**

Hao et al. (2014) proposed that higher-order thinking skills include problem-solving ability and creativity, which argues that creative problem solving consists of three phases: hypothesis formation, hypothesis validation, and communication. Treffinger et al.(1987) believe that in the process of creative problem solving, individuals also need to use creativity while reasoning and solving problems. At present, the most commonly used Creative Problem-Solving (CPS) model in classroom teaching is the modified CPS model by Tefenger and Isaacson. This version of the CPS model consists of three components and six stages, namely: understanding problems (discovering confusion, collecting data, generating problems) creative ideas (discovering ideas) action plans (finding solutions, seeking acceptance). Many studies at home and abroad have shown the effectiveness of CPS model teaching, and a large number of research results have shown that the application of CPS model in various educational fields such as mathematics and engineering has a significant positive impact on the higher-order thinking ability of students at different stages. In the WPI (Work Preference Inventory), Amabile (2014) clearly states that the main components of intrinsic motivation include: competence, curiosity, interest, love, and responsibility for work, etc. Other researchers also agree that intrinsic motivation is helpful to creativity.

### 3.3 Research Framework

Independent Variable	Dependent Variable
The teaching process of the Problem Based Learning method. 1) Set up study groups 2) Create a problem 3) Carry out activities 4) Presentation of achievements 5) Reflection after solving the problem	Creative Problem-Solving Ability 1) Understand the problems 2) Creative Ideas 3) Can action plan

Figure 1 Research Framework

### 3.4 Research Hypotheses

After the implementation of Problem based learning method, the students' Creative Problem-Solving Ability improved explicitly.

## 4. Research Methodology

### 4.1 Research Design

The research "Using problem based learning method to improve creative problem-solving ability of undergraduate students" aims to improve the creative problem-solving ability of undergraduate students by using the Problem Based Learning method, and compare the creative problem-solving ability of students before and after class when using the Problem Based Learning method. This research is experimental research. One group pretest – posttest design was used with the following experimental design:

Table 1 Experimental design

Group	Pretest	Experimental	Posttest
E	T <sub>1</sub>	X	T <sub>2</sub>

The meaning of the symbols used in the experimental design.

E	means	Random Sampling
X	means	experimental
T <sub>1</sub>	means	Pretest
T <sub>2</sub>	means	Posttest

### 4.2 Population and Sample

#### Population

There are 150 students in 5 classes of the first-year majoring in visual communication design for photography course at Vocational and Technical College in the first semester of the 2023 academic year.

### **The Sample Group**

Through random cluster sampling, 30 first-year students majoring in visual communication design of Vocational and Technical College were sampled in the first semester of the 2023 academic year.

### **4.3 Research Instrument**

Using Problem Based Learning method to improve Creative Problem-Solving Abilities in Photography Course of undergraduate students. The research Instruments is as follows:

Lesson plans according to the Problem Based Learning method: that was a student-centered learning method consisted of 5 step of teaching, including: step1, set up study groups. Group cooperative learning is the main form of Problem Based Learning method, Step2, ceate a problem, Teachers put forward new questions in the classroom, let students take the initiative to think, Step3, carry out activities, at this stage, the group members come together, exchange the knowledge and methods they have learned, use the new knowledge to rethink the problem and explore the problem in depth, Step4, presentation of achievements, Each group organizes and summarizes its own learning results, and selects appropriate ways to display their learning achievements, Step5, reflection after solving the problem, at this stage, students need to reflect on the specific operation process of the entire the problem based learning method, and inspire students to summarize the relationship between new theoretical knowledge and problems, by teaching through contents of Photography Course of undergraduate students. Including four lesson plans, 16 hours of teaching which were as follows: chapter 1: portrait photography, 4 hours, chapter 2: wedding photography. (done in studio, kit and caboodle), 4hours chapter 3: graphic creative Photography, 4 hours chapter 4: shoes advertising product photography, 4 hours.

Creative Problem-Solving ability test: the test was created from sub-variables of creative problem-solving ability that was a method of identifying unique solutions to problems through a problem identification and solution planning process. It went beyond traditional methods to find solutions to workflow problems, producted innovation or brand positioning. Developing creative problem solving ability requires continuous improvement to encourage an environment of continuous innovation. Creative problem solving was considered a soft skill, or personal strength. The CPS model had gone through a lot of modifications and refinements, and at present, the model most frequently used in classroom teaching was the CPS model modified by Teffinger and Isakson which consisted of three components: 1) understanding the problem (discovering confusion, collecting information, generating problems). 2) creative conceptualization (discovering ideas). 3) action plan (finding answers, seeking acceptance).

### **4.4 Data Collection**

The data were collected as follows:

1. Determine research objectives: Firstly, clarify the research objectives and issues. Here, 30 freshmen majoring in graphic design from Vocational and Technical College were selected as experimental subjects, which helps to determine what data needs to be collected to answer research questions.
2. Design data collection methods: Determine appropriate data collection methods based on research objectives. The data collection methods used here include on-site observation and experimental design.

Design the differences in students' creative problem-solving abilities before and after using problem-based learning methods. The experimental design method includes developing an experimental plan for three sub abilities related to creative problem-solving ability: the ability to understand problems, the ability to create ideas, and the ability to collect experimental data in an action plan. The total score is 18 points.

3. Data analysis: Input and organize the collected data. This includes encoding, cleaning, classifying, and other processing of data from 30 students for subsequent statistical analysis. Use appropriate statistical methods to analyze data. These methods can be selected based on research questions and data types, including descriptive statistics, analysis of variance, regression analysis, etc. for 30 students before and after the test.

#### **4.5 Data Analysis**

1. Analyze and validate the effectiveness of the course plan, and self guide the consistency index of the Problem Based Learning Method learning ability scoring criteria as the consideration criterion (IOC : Index of item objective congruence).

2. Based on the problem based learning method, evaluate students' learning ability before and after the implementation of creative problem solving ability, and analyze the bias and t-test of statistical data related samples through means and standards from experiments. In this research, the researcher has synthesized the creative problem-solving abilities that will be promoted in students. This ability can be classified into 3 sub abilities: 1) The ability to understand the problems 2) The ability to creative Ideas 3) the ability to action plan.

The "problem based learning method" was conducted on 30 students in the first year grade of Vocational and Technical College, majoring in graphic design at the university, and the students' behavioural performance in each class was observed and recorded in the five teaching sessions of "set up study groups", "create a problem", "carry out activities", "presentation of achievements", "reflection after solving the problem", and five teaching sessions. The changes in students' behaviours show that students' learning awareness, learning strategies, learning activities, learning assessment and creative problem-solving ability are gradually improved throughout the learning process. The specific results of the empirical study are as follows.

### **5. Research Findings**

This study concluded through experimental design that using a problem based learning method to improve a creative problem-solving ability of undergraduate students was reasonable and effective, and the following conclusions were drawn:

1. Based on the problem based learning method can further enhance students' creative problem-solving ability, especially significantly improve their idea generation ability. With the continuous deepening of teaching, the task list reflects an upward trend in students' creative problem-solving ability.

2. Compared with traditional teaching, creative problem solving ability teaching based on the problem based learning method is more helpful in enhancing students' creative problem-solving abilities.

Table 2 The comparing students' creative problem-solving ability of undergraduate students before and after using Problem Based Learning method.

<b>Creative Problem-Solving Ability</b>	<b>n</b>	<b>Full Score</b>	<b>SD.</b>	<b>df</b>	<b>t</b>	<b>p</b>
<b>Pre-test</b>	30	18	6.03	2.71	29	19.33
<b>Post-test</b>	30	18	14.96	2.53		

\*\*Statistically significant at level .01 ( $p < .01$ )

Table 2 shows that the average score of first-year students' creative problem-solving ability after class is higher than the average score before class, indicating that students' Creative Problem-Solving Ability after class is higher than before class  $P < .01$  indicates statistical significance at the .01 level. By implementing the problem based learning method on students, their creative problem-solving ability after class is significantly higher than that before class. This is consistent with the research hypothesis.

## 6. Discussion

1. Utilize problem-based learning methods to enhance college students' creative problem-solving abilities. This is consistent with the concept of Xiangqing et al. (2014), which defines PBL teaching mode as a problem oriented teaching mode and teaching strategy, which can improve students' ability to analyze and solve problems.

2. Compare students' creative problem-solving abilities before and after the implementation of problem-based learning method. Research has shown similarities with the research findings of Sitthichai (2014). Applying the CPS model to cultivate undergraduate creativity in an ubiquitous learning environment, experiments have shown that this strategy can effectively enhance students' creative problem-solving abilities.

## 7. Suggestion

In order to further carry out research on this topic, the research prospects proposed by the author are as follows:

1. Expanding the scope of research and increasing research duration. Future research should expand the sample size and research duration. At the same time, the teaching content should not be limited to a single course, and any interdisciplinary content can be studied to further construct and improve the problem-based learning method teaching strategy.

2. Establishing a multi-dimensional evaluation plan for creative problem-solving ability. Future research can use video capture devices, eye movement devices, EEG devices, etc. to record more physiological and procedural data of students, and complete scientific measurement of students' creative problem-solving

ability. Collect more qualitative data to gain a deeper understanding of the trajectory of improving students' creative problem-solving abilities.

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## **Research on class procedures for utilizing Augmented/Virtual Reality (AR/VR)- Based Teaching Model**

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### **ABSTRACT**

Recently, the latest technologies such as big data, AR/VR, and metaverse are being used in teaching methods. Among them, augmented/virtual reality (AR/VR)-based learning involves learning activities through interactions such as direct observation, manipulation, experience, and repetitive mastery of a virtual world that imitates the real world, depending on the learning goal the learner wants to achieve. It is a learning model that performs and achieves higher-order learning goals. In this paper, I proposed a plan for specific teaching procedures using AR/VR to carry out teaching activities that enable instructors to achieve learner-centered, high-level learning goals.

**Keywords:** Augmented Reality (AR), Virtual Reality (VR), Augmented/Virtual reality (AR/VR)-based learning

### **1. Introduction**

Recently, the latest technologies such as big data, AR/VR, and metaverse are being used in teaching methods. One of the technologies that has recently been receiving the most attention in the educational field is augmented reality and virtual reality based on realistic technology (Chun Si-woo-si-u et al., 2020; Myeong-Hyeon Yoo et al., 2018). In the field of education, we are trying to actively utilize new media to transition from efficient knowledge transfer to effective learning. In this context, many universities need to apply teaching and learning models using the latest technology to achieve high-level learning goals centered on learners who can apply and utilize knowledge, rather than simply acquiring knowledge (Chun Si-woo-si-u et al., 2020; Heo Jeong-pil, 2022; Myeong-Hyeon Yoo et al., 2018).

Teaching methods refer to teaching actions and procedures, or means or methods to achieve learning goals. Instructors must select and use appropriate teaching methods in class. Teaching methods to achieve high-level learner-centered learning goals require the use of learner-led teaching methods that allow learners to acquire learning content through direct experience and interaction, rather than instructor-led explanations. In this context, instructors must have a good understanding of the characteristics of teaching methods using new technologies, and among them, teaching models based on AR/VR can be said to be a more effective and innovative method. In this paper, I would like to explore specific teaching procedures to promote the use of AR/VR-based teaching models as a way to achieve high-level learner-centered learning goals using the latest teaching methods.

## **2. Objective**

The purpose of this paper is to promote the use of teaching methods that enable instructors to obtain high-level teaching goals using the latest technology, AR/VR. To this end, I would like to present specific teaching procedures that will help instructors better understand the characteristics of AR/VR-based learning and improve their ability to utilize AR/VR-based teaching methods in their classes.

## **3. Understanding AR/VR based learning**

Augmented Reality (AR) is a technology that enhances the sense of reality by combining virtual objects, information, and data in the real world (Gye Bo-kyung et al., 2018). It can be defined as a technology that enhances the sense of reality by mixing information from the real world with data such as computer graphics, voice, and video (Myeong-Hyun Yoo et al., 2018). AR must blend reality and the virtual world, allows for real-time interaction, and has the characteristics of being implemented in a 3D environment (Azuma, 1997). Virtual Reality (VR) is a technology that uses computer terminal technology to create a three-dimensional situation or environment similar to reality, allowing users to realistically experience scenes that cannot be experienced interactively (Chun Si-woo-si-u et al., 2020). It refers to a technology that allows learners to immerse themselves in a virtual space created by a computer by recognizing it as reality (Myeong-Hyeon Yoo et al., 2018). What AR and VR have in common is that they provide users with a sense of immersion, presence, and interaction, but AR is based on the real world. It is distinguished from VR (Myeong-Hyeon Yoo et al., 2018).

Augmented Reality (AR)-based learning refers to learning activities that enhance the sense of reality and immersion by synthesizing and presenting virtual objects, information, and materials in actual physical space. Virtual Reality (VR)-based learning refers to learning in which learners utilize interaction with objects in the virtual world in a virtual reality created similar to the real environment (Brooks, 1999). VR-based learning allows learners to perform learning activities that are impossible in the real world through direct observation, manipulation, experience, interaction, and repetitive mastery of a virtual world that imitates the real world with a computer.

Augmented/Virtual Reality (AR/VR)-based learning utilizes a learner-led teaching method, whereby learners perform learning activities through interactions such as directly observing, manipulating, experiencing, and repeatedly mastering a virtual world that imitates the real world. A variety of classes are available depending on your desired learning goals. In particular, AR/VR-based learning can maximize educational effectiveness through blended learning, which utilizes various combinations of classroom and online classes depending on the learning purpose.

## **4. AR/VR based learning procedure**

AR/VR-based learning requires specific preparation before the start of the semester. It is necessary to check whether AR/VR content suitable for learning goals and content is ready (purchase, development, etc.). The general procedure for AR/VR-based learning can be in the following order: before the semester starts, before class, during class, and after class.

#### 4.1 Analysis of educational conditions

Analysis of educational conditions determines whether to apply AR/VR-based teaching methods by analyzing the learning content, learner characteristics, and learning environment of the subject in question.

4.1.1 Learning content: analyze information on the most characteristic aspects of the learning content of the subject in question, as well as knowledge, skills, and attitudes related to the learning goal.

4.1.2 Learner: analyze information that can be used as a reference in selecting teaching and learning methods, such as the competency, aptitude, motivation, and preferred learning method of the learner who will complete the subject.

4.1.3 Learning environment: analyze the physical environment, including institutional environment such as teaching and learning-related school rules and educational operation regulations, classroom infrastructure, teaching and learning center support, and budget.

#### 4.2 Subject analysis to determine suitability for AR/VR-based learning

Review the suitability of AR/VR-based learning methods to achieve the learning goals of the subject in question and conduct an analysis on whether there are AR/VR learning resources to use.

4.2.1 In order to conduct AR/VR-based classes, we analyze specific learning topics and check the presence or absence of AR/VR learning content related to the learning topic (use of search data, introduction, new development, etc.), and AR/VR for the topic. Learning content must be prepared.

4.2.2 If you need to identify parking lots where AR/VR-based classes are possible based on the lecture content of the semester, decide whether to apply it to every parking lot or only to a specific parking lot depending on the learning topic and content.

#### 4.3 Develop lesson plan

A syllabus is a document that contains the overall plan for the class, including class goals, content, methods, and evaluation standards.

4.3.1 The lesson plan describes how to run the class based on the contents of the lesson plan. If it is determined that AR/VR-based classes are necessary based on the subject analysis results, details need to be specified in the class operation plan. At this time, among all class parking lots, the parking lot to which AR/VR-based classes are applied and the corresponding teaching method must be clearly presented.

4.3.2 The class operation plan describes in detail the content of the AR/VR-based class and the learning methods used.

#### 4.4 Preparing AR/VR class materials

Instructors must carefully explore and prepare AR/VR class materials suitable for achieving learning goals by referring to the learning topic and content.

4.4.1 AR/VR class materials analyze specific learning topics, check the presence or absence of AR/VR learning content related to the learning topic (use of search data, introduction, new development, etc.), and provide AR/VR learning content for the topic. You have to prepare.

4.4.2 When preparing AR/VR teaching materials, the usability of AR/VR content is affected by various elements of the content, so it is necessary to comprehensively consider these factors. The evaluation criteria for AR/VR teaching materials need to be classified into safety and convenience, subdivided into multiple evaluation factors, and then apply a hierarchical classification system that defines various evaluation items for each evaluation factor (Han Su-min et al., 2021).

#### 4.5 AR/VR learning environment inspection

Instructors must prepare AR/VR class materials suitable for achieving learning goals by referring to the learning topic and content, and inspect the learning environment such as the classroom and computer room where the class will be held in advance.

4.5.1 Additionally, when learning activities are performed through individual learning and team learning, inspection of the learning environment taking this into account should be considered.

4.5.2 The learning environment ranges from space for uploading and utilizing AR/VR class materials (e.g. computer lab, individual equipment, etc.) to presentation equipment to explain and present learning content (e.g. beam projector, computer, audio equipment, etc.). Everything must be checked in advance.

#### 4.6 AR/VR class orientation

Based on the syllabus, the educational content, main teaching and learning methods, AR/VR class operation plan, and roles of instructors and learners are clearly explained.

4.6.1 AR/VR-based learning: for each week, we provide guidance on the class method to be conducted in that week. In particular, prior training is provided so that learners can smoothly perform learning activities using AR/VR learning resources.

4.6.2 Learning procedures: instructor and learner roles are divided for each detailed plan, AR/VR learning materials are provided, and future learning schedules regarding detailed learning methods are provided

4.6.3 Evaluation plan: information on the evaluation plan for the results as well as the overall evaluation of the AR/VR-based class is presented.

#### 4.7 Perform AR/VR class activities

Activities during class are conducted with learning content directly related to the learning topic. The instructor participates in the learners' class activities as an observer and determines whether the learning content is being reflected in the activities and whether the class is progressing in accordance with the learning content.

4.7.1 If the course progresses differently from the learning content or if the students proceed based on incorrect understanding, the instructor intervenes and supports progress in the right direction.

4.7.2 Representative AR/VR classroom activities involve learners directly observing, manipulating, experiencing, interacting, and repeatedly mastering a virtual world that imitates the real world.

#### 4.8 Monitoring AR/VR class learners

4.8.1 AR/VR classes utilize online and offline teaching and learning environments, so if learners do not adapt to the teaching and learning environment, they may drop out of the class. To prevent this, in the process of preparing for class, training on how to use the AR/VR class environment must be provided so that learners can make good use of it.

4.8.2 In AR/VR classes, instructors must monitor whether learners actively participate in the learning process and perform their own learning activities and provide appropriate help when help is needed.

#### 4.9 AR/VR class learning promotion activities

Instructors observe learners' learning activities during AR/VR classes and, when necessary, perform activities to motivate learning and promote learning participation.

4.9.1 4.9.1 In the process of learners performing learning activities, the speed of understanding of learning varies from person to person, and individual differences may occur in the method and level of utilizing learning methods. Therefore, instructors must continuously monitor learners' learning activities during the learning process and provide necessary help in a timely manner.

4.9.2 Learning promotion activities in AR/VR classes include responding to learners' questions, providing appropriate materials, and using questions, tasks, and discussions to promote interaction between instructors and learners, and interaction between learners. This is needed.

4.9.3 When learners perform cooperative learning, they are encouraged to research and present their own work to prevent team members from free riding. To achieve this, indicate that you have performed what you have organized or provide supporting data.

#### 4.10 Announcement of AR/VR class activity results

Learners summarize the content of activities such as direct observation, manipulation, experience, interaction, and repetitive mastery in AR/VR classes and present them so that the results can be shared with instructors and fellow learners.

4.10.1 In the process of carrying out AR/VR classes through a virtual world that imitates the real world, learners actively participate and check the class results achieved through activities such as direct observation, manipulation, experience, interaction, and repetitive mastery. To do this, students are asked to fill out a learning reflection form for each parking lot.

4.10.2 Through the presentation and discussion process, learners can freely discuss activities such as direct observation, manipulation, experience, interaction, and repetitive mastery in the process of performing the AR/VR class.

4.10.3 The instructor provides feedback on what learners synthesized and discussed.

#### 4.11 AR/VR class evaluation

An evaluation system that can be recognized not only by instructors but also by all learners regarding evaluation elements and weights must be established. In other words, the weight of evaluation factors may vary for each class in which AR/VR classes are used.

4.11.1 (Personal evaluation) It becomes the basis of teaching accountability for instructors and learners.

4.11.2 (Team evaluation) Team members work together to perform tasks and provide rewards to justify their efforts on team tasks

4.11.3 (Peer evaluation) It can provide rewards for individuals to participate in team activities while also relieving the pressure of having to perform tasks when a team gets a low score or when other members fail to complete their part.

## **5. Conclusion**

In this paper, I presented specific teaching procedures to help instructors better understand the characteristics of AR/VR-based learning and improve their ability to utilize AR/VR-based teaching methods in class.

Such AR/VR-based teaching methods have various characteristics and can be used to achieve learner-centered, high-level learning goals. Compared to other media, AR/VR-based learning has excellent realism and situational learning effects, and is effective in improving learning immersion and concentration. In addition, cooperative activities through active learning and interaction through learner observation and control have great educational effects (Heo Jeong-pil, 2022; Laine, 2018). AR/VR-based learning utilizes the characteristics of realism and immersion to increase educational effectiveness by allowing learners to experience situations similar to reality in advance. Using AR/VR-based learning in blended learning can solve teaching and practice problems that are shortcomings of existing e-learning. AR/VR-based learning can be effectively used to measure learners' knowledge transfer and learning transfer by virtually constructing a learning environment that is difficult or complex to implement in the real world (Bae Jae-han, Noh Ki-young, 2015).

## **6. Suggestions**

Augmented reality (AR)-based learning can be used for learning activities that were difficult to perform in an actual experimental environment, such as experiential learning, IT education, and science education. Augmented reality (AR)-based learning enhances the sense of reality by synthesizing virtual objects, information, and data in real physical space to provide a sophisticated understanding of the work process when operating a machine (Lester & Hofmann, 2020) and the work procedures of a task. It can be used to improve the sophistication of work performance by reducing errors.

Augmented reality (AR)-based learning is suitable for areas such as content that is difficult for learners to explain with 2D images or text materials, content that is difficult to directly observe or practice, expensive experiments, and risky learning. In fact, it is widely used in medical anatomy, Boeing aircraft maintenance, automobile parts assembly, and construction.

Virtual reality (VR)-based learning includes experimental learning, simulation education and tutorials, emotional immersion through embodied learning that combines physical experience and learning, real-time decision-making or learning in situations involving psychological pressure, aviation piloting, ship operation, etc. It can be used to prevent safety accidents when practicing for beginners in high-risk job fields such as welding and electrical wiring.

Augmented/virtual reality (AR/VR)-based learning can be used to achieve high effectiveness by being used in education in industries where it is difficult or risky to purchase expensive manufacturing equipment due to the nature of the manufacturing industry.

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## **Academic Affairs Administration Based on the Concept of Quality Management for Secondary Schools in Xiamen City, Fujian Province in China**

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### **ABSTRACT**

The objectives were to study the current state and to study the guidelines for the development of academic affairs administration based on the concept of quality management for Secondary Schools in Xiamen City, China. The samples consisted of 160 teachers were used stratified random sampling. Moreover, 3 specialists for interview and focus group meeting. The instruments were used questionnaires and semi-structured Interviews form. Data analysis in this study were used frequency, percentage, mean, standard deviation and content analysis.

The results of research showed that : 1. The overall current state of academic affairs administration based on the concept of quality management for Secondary Schools in Xiamen City was high level. 2. The guidelines for the development of academic affairs administration based on the concept of quality management for Secondary Schools in Xiamen City were to (a) Improve learning management to diversity. Taking management results are written in teaching and learning for furthers planning. (b) Develop evaluation test. (c) develop systemic evaluation of teaching and learning management planning.

**Keywords:** Academic Affairs Administration; Quality management; Secondary Schools in Xiamen;

### **1. Introduction**

Academic affairs administration is at the heart of educational institutions, as improving the quality of students to have desirable characteristics requires academic administration. The quality of teaching management is the guarantee of teaching quality. Learning quality is a comprehensive reflection of all aspects of work quality. Only by grasping the quality of work in all aspects can the enthusiasm, initiative and creativity of teachers and students be fully brought into play and the quality of teaching can be guaranteed. The current state of the national

educational quality assessment of Chinese secondary schools are in moderation. Therefore, It is necessary for us to study the level of academic management? How should we improve it in the Xiamen city of China.

## **2. Research Objective**

(1) To study the current state of academic affairs administration based on quality management for secondary schools in the Xiamen city of China.

(2) To study the guideline to academic affairs administration development based on quality management for secondary schools in the Xiamen city of China.

## **3. Literature Review**

This chapter presented the review of related researches on the academic administration of secondary schools in the Xiamen city of China.

### **3.1 Theory, Concept and Related Research**

Academic administration refers to a process. that the administrators using certain methods and instruments make all the academic activities achieve the school's established goal of cultivating talents. It is not only the core of all management work in schools, but also the basis of teaching process. It is an important guarantee to improve the quality of teaching. It includes seven aspects: curriculum management director Support, teaching process, media setting for instruction, measurement and evaluation research, coordination and cooperation.

#### 3.11 Academic administration

- a.) curriculum development
- b.) learning management
- c.) measurement and evaluation

#### 3.12 Quality administration

- a.) Plan b.) Do c.) Check d.) Act

#### 3.13 The guideline to Academic administration development

The guideline to academic administration based on the concept of quality management

#### 3.14 Summary

Summary from the literature review from the academic affairs administration including the curriculum management and learning management and evaluation (Forest & Kinser, 2002).

For quality management including the plan, do, check, act(Deming W. Edwards, 2009).

### 3.2 Research Framework

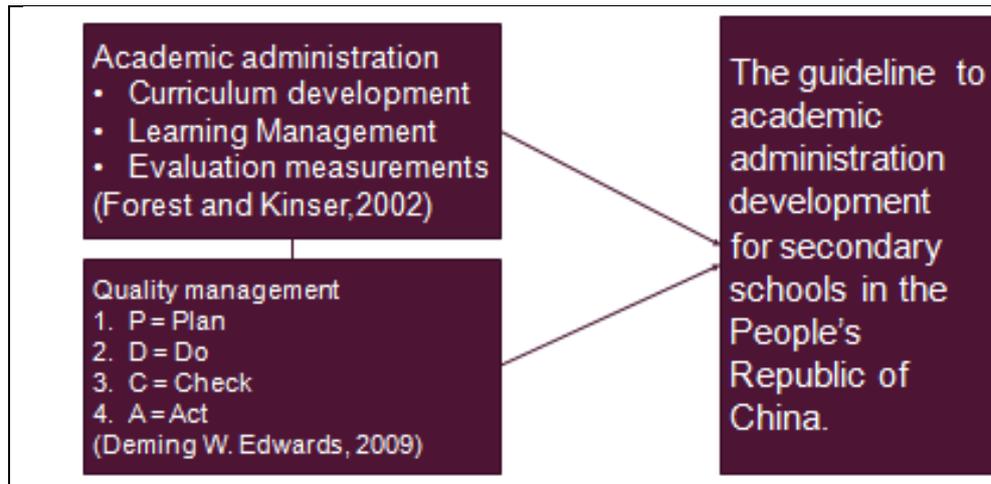


Figure 1 Research Framework

### 3.3 Research Hypotheses

## 4. Research Methodology

This research was mixed method research. According to objective 1 was a quantitative research and objective 2 was the qualitative research.

### 4.1 Research Design

1) to study the current states of the academic affairs administration of Chinese language study program in secondary schools of Xiamen city in seven aspects: Chinese curriculum management director Support, teaching process, measurement & evaluation, media setting for instruction, research for developing the quality of Chinese language study program; coordination and cooperation on developing the Chinese language study program. There are totally 22 secondary schools in Xiamen city which have Chinese language study program in Xiamen city. In order to ensure the validity of the research, the researcher would randomly choose 5 schools in Xiamen city to collect the data (Krejcie & Morgan, 1970, p. 268) The statistics used will be frequency, percentage, mean and standard deviation.

2) To identify the guidelines to improve the academic administration of study programs in secondary schools of Xiamen from interviewing some experienced teachers, administrators, and experts.

### 4.2 Population and Sample

The population was 294 teachers . The sample was obtained by opening. The table for about 160 teachers ( Krejcie & Morgan 1970, p.608) by stratified random sampling .Moreover ,3 specialists or key informants for interviews and focus group meeting.

#### **4.3 Research Instrument**

##### 1) Validation of Instrument

The instrument was subjected to content validation for contextualization purposes. The instrument was evaluated by 3 experts (IOC between 0.67-1.00).

##### 2) Reliability of Instrument

The instrument was subjected to content validation for contextualization purposes. The instrument was pilot tested to 30 participants who were not part of the sampling and was subjected to Cronbach Alpha test of reliability value of 0.43 that high criteria.

#### **4.4 Data Collection**

According to the first objective, the questionnaire is used as a google form by e-mail. According to the second objective, the interview form is used to interview 3 experts by the researcher interviewed by myself. A 5-point Likert scale was used and the obtained weighted mean of their responses was verbally interpreted with the use of the following scoring and interpretation:

#### **4.5 Data Analysis**

The presented data analysis results show means and standard deviations for three different criteria related to education. The interpretation of these results appears to categorize each criterion as being at a "high level." To better understand these results, let's break down each one:

- 1) Mean of curriculum development value 4.19, SD=0.44 was high level.
- 2) Mean of learning management value 3.90, SD=0.41 was high level.
- 3) Mean of evaluation measurement value 4.10, SD=0.43 was high level.

In all three cases, the high mean values and low standard deviations suggest that the criteria of curriculum development, learning management, and evaluation measurement are assessed positively and consistently by the respondents. This indicates a high level of satisfaction or effectiveness in these areas within the context of the analysis, although the specific reference for what constitutes a "high level" may depend on the context or a predefined scale used in the analysis.

In addition to these points, it's essential to emphasize a culture of continuous improvement, collaboration, and accountability in academic affairs administration. Quality management principles, such as the Plan-Do-Check-Act (PDCA) cycle, can be applied to ensure ongoing assessment and refinement of teaching and learning practices.

Remember that the specific guidelines and strategies may vary depending on the context and goals of your institution, so customization and adaptation to the unique needs of your academic environment are crucial.

### **5. Research Findings**

The current state of academic administration is based on the concept of quality management. The guideline of academic administration development based on the concept of quality management are need follows:(a) Improve learning management to peculiarity, Taking management results are write in teaching and

learning for furthers planning. (b)Develop evaluation test. (c) develop systemic evaluation of teaching and learning management planning.

The development of education is a complex systematic process involving multiple disciplines and systems. This paper only analyzes the specific problems in education management of Xiamen Middle School and puts forward countermeasures and suggestions, which can provide references for the education management of the school to a certain extent. The education situation of Xiamen Middle School may be different from other regions and cities in various aspects, and the management problems and solutions faced by local governments are also different. How to find common problems faced by other local governments in education management and propose feasible solutions still needs more scholars and experts to conduct.

Table 1 Academic affairs administration

No.	Item	$\mu\bar{X}$	$\sigma$ SD	Interpretation
1	curriculum development	4.19	0.44	High
2	Learning Management	3.90	0.41	High
3	Evaluation measurement	4.10	0.43	High
<b>Total</b>		<b>4.06</b>	<b>0.43</b>	<b>High</b>

The guideline of academic affairs administration development based on the concept of quality management are need follows:(a) Improve learning management to peculiarity, taking management results are write in teaching and learning for furthers planning. (b)Develop evaluation test. (c) develop systemic evaluation of teaching and learning management planning.

## 6. Discussion

1) The current state of academic affairs administration based on the concept of quality management was high ( $\bar{X}=3.90, SD=.43$ ). How to develop the current state of academic administration from high level to highest level by improve learning management. Especially taking management results are write in teaching and learning for further learning, Develop evaluation test and develop systematic evaluation of teaching and learning management planning.

By following this structured approach and emphasizing data-driven decision-making, continuous improvement, and stakeholder engagement, you can work towards elevating the current state of academic affairs administration to the highest level of quality management in teaching and learning.

2) The guidelines of academic affairs administration based on the concept of quality management for secondary schools in Xiamen City, Fujian Province were to (a) Improve learning management to diversity, Especially , taking management results are write in teaching and learning for furthers planning, you must focus on learning and teaching management (b) Develop evaluation test. How to develop evaluation test ? you must review and focus about evaluation test for students .(c) Develop systemic evaluation of teaching and learning

management planning, How to develop systematic evaluation of teaching and learning management planning? You must review quality management systems? for example :Plan Check, Act, and you focus the “Action”.

Review and Iterate: Periodically review and iterate the entire process to ensure ongoing improvement and alignment with quality management principles.

Remember to involve relevant stakeholders, including teachers, students, and parents, in this process to ensure a well-rounded and effective evaluation of teaching and learning management planning.

## 7. Suggestion

(1) Change research methods and research concepts. The development of disciplines has been deeply influenced by the revolution of communication technology. In this context, academic education research needs to change. To pay more attention to empirical research in research methods, and to break through the traditional standard of dividing media types into majors.

(2) when students choose other teaching models of junior high school courses , they should comprehensively consider their own study habits, academic needs, time schedule and other factors to make a choice.

## 8. Acknowledgement

As time passes, two years of student study will be marked in the blink of an eye. At the moment when my thesis is about to be completed, I want to say only two words of gratitude.

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Nie Pingping

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## **Guidelines for the development of the applications of information technology for school management of Kehua School.**

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### **ABSTRACT**

The objectives of this study were: 1) to study the current state of the applications of information technology for school management of Kehua School; and 2) to study the guidelines for the development of the applications of information technology for school management of Kehua School. This study was descriptive research using a mixed method design of quantitative and qualitative analysis. Data were collected from 120 teachers in Kehua School. Data were collected by questionnaires and interviews. The data were analyzed by using frequency, percentage, mean, standard deviation and content analysis.

The research findings: (1) As shown by data studies the overall mean of the level of the applications of information technology for school management of Kehua School was at the more practice level sort the mean in descending order as follows: Home-school management, Personnel management, Teaching management, General management, Scientific research management Logistics management which was at the moderate practice level.(2) the guidelines for the development of the applications of information technology for school management of Kehua School were: integrate the school's existing information technology platform, choose to purchase or develop an information technology management system that meets the school's academic situation, add modules to identify academic plagiarism, improve the school's scientific research capabilities, focus on optimizing logistics management, create student health systems, accommodation service management systems and verification The system of student status improves the management efficiency of the school.

**Keywords:** Guidelines for the Development, Information Technology, School Management

## **1. Introduction**

The advent of information technology era also provides more abundant resources for the development of school management. Information technology is a basic tool to solve the problem of school management in the information age, which will fundamentally improve the level of school management and has great significance to promote the overall reform of education.(Kang, 2016, p. 78)

Imagine when teacher files, teacher salaries, teacher performance reviews, class schedule information, repairs, leave... When all the documents are stacked on the desk waiting to be processed, how does the person feel? (Hui, 2017, p. 25) Take the teaching director as an example, the management of school teaching activities inevitably needs to keep abreast of various situations of teachers and students, such as course adjustment and course change, usually through written application or feedback, and the teaching director can not get the information in time. Now through the information platform, as long as the class schedule changes, the academic director's mobile phone will receive real-time change information. The use of information technology to establish a school comprehensive management system, education and teaching system, security management system, personnel management software system, logistics management system, etc., is very necessary for managers, the importance of which lies in the processing of affairs, access to information anytime and anywhere, time and space barriers will be broken. Including activity class registration, student holiday meal statistics, leave, repair, etc., the school has realized online management. Therefore, the use of information technology to improve management means, to achieve school management, teaching resources automation, paperless circulation, school management from vertical management to horizontal management change, improve management efficiency.

## **2. Research Objective**

(1) To study the current state of the applications of information technology for school management of Kehua School.

(2) To study the guidelines for the development of the applications of information technology for school management of Kehua School.

## **3. Literature Review**

The term information technology first appeared in the Harvard Business Review The article mentioned that "this new technology does not have a single name, and we should call it information technology.

Development guide is the basis for the development of things to guide, guide and identify the right direction.

### **3.1 Theory, Concept and Related Research**

The meaning of school management includes two aspects: first, the administration of schools by the administrative departments of education at all levels, that is, education administration; The second is the internal management of the school, namely the school administration.(Yao, 2017, p. 37)

Management as a service. In other words, school management is to serve education and teaching, to serve teachers and students. (Bai, 2016, p. 17)

School management means that the school administrative leaders rationally organize and use various forces of the school, make decisions, organize, assign personnel, command, control and coordinate all aspects of the school work and various factors (including variable and immutable factors), so as to fully implement the Party's educational policy and effectively realize the purpose of training and individual talents. (Wang, 2018, pp. 29-32)

In my opinion, school management means that in order to promote the characteristic development of the school, the professional growth of teachers and the all-round development of students, the school administrators effectively integrate the existing resources inside and outside the school, play the functions of decision-making, planning, organization, inspection, regulation, summary, reflection and innovation, and constantly solve the problems in the process of school education and teaching activities. In short, school management is to promote the development of schools and teachers and students to effectively solve various problems in the process of school education and teaching activities.

### 3.2 Research Framework

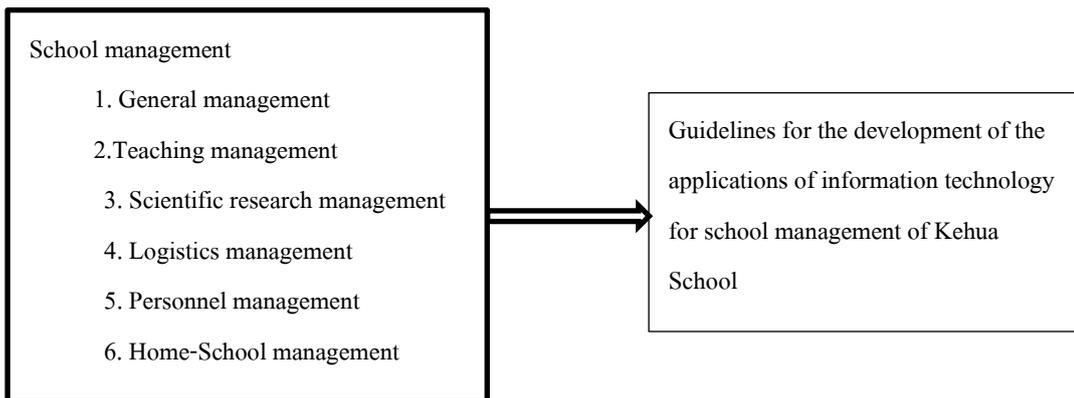


Figure 1 Research Framework

### 3.3 Research Hypotheses

Information technology can improve the management efficiency of Kehua school, and put forward the application guide of information technology for the management of Kehua school.

## 4. Research Methodology

This study used a mixed method design of quantitative and qualitative analysis. In mixed methods, questionnaires were used to collect data and some information was obtained from the interviews. Descriptive statistical techniques used in the analysis of the collected data will include frequency, percentage, mean, and standard deviation.

#### 4.1 Research Design

The research design was divided into two stages: 1) to study the current state of the applications of information technology for school management of Kehua School (quantitative method; data were collected by using questionnaires) 2) to study the guidelines for the development of the applications of information technology for school management of Kehua School. (qualitative method; data were collected by interview some experienced teachers, administrators and experts)

#### 4.2 Population and Sample

The population of this study composed of 150 teachers in Kehua School.

The sample of this study composed of 120 teachers in Kehua School. Determine the sample size by using the table of Sampling was done by simple random sampling.

#### 4.3 Research Instrument

Tools and methods for collecting data are questionnaires and interviews. The steps of designing the research tools include:

1. Clarify the object of the questionnaire according to the purpose of the study.
2. Establish a questionnaire on using information technology to promote the development of school management. The design of the problem was based on a conceptual framework, theoretical and review of relevant research literature, and operational definitions. Data collection tools were as follows:

1) Questionnaires composed of two parts as detailed below;

**Part 1:** Personal Data Questionnaire: The personal data questionnaire was composed of questions related to position, teaching duration, age and major.

**Part 2:** The opinions of teacher on the applications of information technology for school management of Kehua School.

The informant may answer the questions by selecting a number from a rating scale of 1 to 5; each number represents the level of practice.

The level of 5 to 1 in the current state is the practice level:

- 5= most practice level in the current state
- 4= more practice level in the current state
- 3= moderate practice level in the current state
- 2= low practice level in the current state
- 1= very low practice level in the current state

**Part 3:** Suggestion on the applications of information technology for school management of Kehua School.

### **Instrument Quality Testing**

#### **Test for Validity**

1) Proposed the questionnaire to the advisor for checking and correcting

(Consider the issues of the language used and its conformity with operational definition). Adjusted the questions based on the advisor feedback.

2) Proposed the revised questionnaire to the three experts for content validity

evaluation. Revised the questions based on the experts feedback. Calculated the Index of Item-Objective Congruence: IOC. ( $IOC \geq 0.67-1.00$ )

#### **Test for Reliability**

Test for reliability by using Cronbach's alpha coefficient formula. The reliability of the whole questionnaire was 0.96.

### **4.4 Data Collection**

This study was designed by a mixed method of quantitative analysis and qualitative analysis. The quantitative questionnaire were distributed to 120 teachers of Kehua School to fill in the questionnaire and then give back. The researchers collected all the questionnaires in three ways: first, with the help of information technology teachers, go to the computer classroom to complete the questionnaire; second, family or friends will guide them to fill in the questionnaire; and third, the questionnaire will be sent to the teacher through WeChat.

### **4.5 Data Analysis**

Data analysis were as follows:

Part 1: Personal data of the respondents was analyzed by using descriptive statistics include: Frequency and Percentage.

Part 2: The current state of the applications of information technology for school management of Kehua School was analyzed by using descriptive statistics: means and standard deviation.

Part 3 :Content analysis: data from the interview

Part 4 :Statistics for instrument quality testing include: Index of item - Objective Congruence: IOC. Cronbach's Alpha Coefficient

## **5. Research Findings**

Personal data of the respondents who were teachers in Kehua School. There were 120 respondents Most of the respondents were teachers 85%, number of years of teaching experience, there were 40 persons with less than 3 years of teaching experience, which accounted for 33%, 50 persons with 3 to 9 years of teaching experience, which accounted for 42%, and 50 persons with more than 9 years of teaching experience, which accounted for 25%.In terms of age, 51 or 43% of the population were aged 20-30 years, 45 or 37% were aged 31-40 years, 14 or 12% were aged 41-50 years, and 10 or 8% were aged 50 years and above.The number of teachers specializing in literature, history, and philosophy is 62, more than half, or 52%. The number of teachers

specializing in science or engineering is 38, or 32%. The number of teachers specializing in arts or physical education is 20, or 16%.

The researcher analyzed the data using mean and standard deviation of respondents 120 teachers. Analysis results were detailed in the table

Table : The mean and standard deviation of the level of the applications of information technology for school management of Kehua School (overall).

No.	Item	$\mu$	$\sigma$	Interpretation
1	General management	4.55	0.68	most practice
2	Teaching management	4.63	0.63	most practice
3	Scientific research management	4.32	0.50	more practice
4	Logistics management	3.29	0.47	moderate practice
5	Personnel management	4.72	0.70	most practice
6	Home-School management	4.81	0.51	most practice
Total		4.39	0.58	more practice

## 6. Discussion

From the table revealed that the overall mean of the level of the applications of information technology for school management of Kehua School was at the more practice level ( $\mu=4.39$ ,  $\sigma=0.58$ ), sort the mean in descending order as follows: Home-School management ( $\mu=4.81$ ,  $\sigma=0.51$ ), Personnel management ( $\mu=4.72$ ,  $\sigma=0.70$ ), Teaching management ( $\mu=4.63$ ,  $\sigma=0.63$ ), General management ( $\mu=4.55$ ,  $\sigma=0.68$ ), Scientific research management ( $\mu=4.32$ ,  $\sigma=0.50$ ), Logistics management ( $\mu=3.29$ ,  $\sigma=0.47$ ).

### *Guidelines for the development of the applications of information technology for school management of Kehua School*

Schools can improve the management system, optimize educational posts, and use wechat mini programs to assign tasks to ensure that everything is done. the enterprise wechat is used to build a new logistics service system based on Internet +, aiming at the characteristics of school logistics management, supervision and service, and oriented to personnel, through "sharing and interworking" of resources, intelligent logistics with "service" as the core is built. To provide all-weather, high-efficiency, personalized new logistics services for the staff, the construction of fine, standardized and humanized, information, intelligent logistics service support system, comprehensively improve the school logistics management service level.

In summary, the use of information technology to enhance the effectiveness of school management can be improved in the following ways:

Using the smart Campus management system, according to the collected personnel information, teachers and students can enter and leave the dormitory, classrooms and public areas of the school by simply brushing their faces in front of the face recognition device. At the same time, the device will upload relevant

records to the background and support remote control by the administrator. Avoid frequent registration, save time, in a real sense to achieve a non-inductive travel at the same time can improve convenience.

## **7. Suggestion**

### ***(1)The level of information technology application in the management of Kehua School, Nanshan District, Shenzhen, China***

Integrate existing platforms and promote management informatization. It is necessary to carry out a long-term plan when starting the construction of school information, including the construction of campus network and the introduction of application platform. The strong technical strength of the information department of the university integrates various platforms of campus network management, campus website construction and application management, based on a shared basic data platform. Single sign-on is implemented. Teachers in the school only use one account to log in, and all other platforms do not need to log in again. Data can be shared between platforms, and so can students and parents. This structure greatly improves the convenience and efficiency of use, creates a good environment for the smooth promotion of management information, and lays a good foundation for further expansion in the future.

### ***(2)Guidelines for the development of the applications of information technology for school management of Kehua School***

With the help of the "micro school +" platform, complete the evaluation with a badge. The badge is built with a chip, the teacher with the help of FC converter, scan the badge, you can know the student from which grade which class, what name, the teacher can at any time to evaluate their behavior in school.

When students enter the school, they can collect student information through the witness information collection machine, and the collected information is directly saved to the server. The background management system will organize all the information related to the students, establish the target resource library, and form the "one person one file". If teachers want to know the relevant information of a student, they only need to log in to the background management system to query.

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