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Antecedent Effects of The Collaborative Corporate-Community Practices and Exemplary Role of Green Industry Firms of Thailand: A Proposed Model

Angsaya Siepong, Ph.D.

Sripatum University International College

E-mail: angsaya.si@spu.ac.th

ABSTRACT

Based theoretical insights into corporate environmental responsiveness, this study uncovers antecedent effects of the collaborative corporate-community practices, and proposes a model of exemplary green industry firms of Thailand. The representative green industry firms not only demonstrate their pro-active environmentalism, desire and endeavor toward re-enforcing environmental sustainability, but also aim to achieve sustainable development performance. This paper conducts a qualitative in-depth interview with corporate upper-level executives in the green industry firms across sectors. A framework of exemplary green industry firms of Thailand through the collaboration between corporate and community practices is outlined. Three distinctive features including competitiveness, legitimacy and ecological responsibility are articulated, and are referred to as the antecedent effects that drive corporate environmental activities. Moreover, the consolidation of corporate environmental practices and community engagement is anchored to a pragmatic approach that leads firms to attaining sustainable development performance. This paper also discusses key findings discovered from the field interviews. The implications for both research and managers, as well as recommendations for further study are also present.

KEYWORDS : Corporate Role Model, Corporate Environmental Responsiveness, Green Industry, Collaborative Corporate-Community Practice, Sustainable Development Performance

1. Introduction

Researchers and business practitioners have widely expressed their concern about the natural environment degradation in different main streams. While a number of studies placed their attention upon corporate environmentalism, environmental orientation and environmental marketing strategies e.g. (Banerjee et al., 2003, Menon and Menon, 1997, Baker and Sinkula, 2005). Numerous research scholars have sought to understand about corporate environmental responsiveness, environmental motivation toward actions, and its relationship with environmental strategies and practices e.g. (Bansal and Roth, 2000, Paulraj, 2009, González-Benito and González-Benito, 2005). Additionally, a vast area of studies has been developed and consolidated the

essence of the natural environment in marketing strategy decision making, environmental marketing strategies and business performance (Gladwin et al., 1995, Hart, 1995, King, 1995, Sharma and Vredenburg, 1998, Shrivastava, 1995, Varadarajan, 1992, Baker and Sinkula, 2005).

In practice, many corporations around the globe take into account environmental transformation process with the objectives of reducing negative impact created by their business activities (González-Benito and González-Benito, 2005). For example, Unilever's senior management, who have firmly supported sustainability in their business have invested heavily in green technology in order to reduce environmental impact and footprints, as well as to promote an attitude of responsible consumption (Kotler, 2011). Other companies with such product awareness and green approaches/strategies are BMW and Xerox, both of which have promoted recycling material within their operations and production (Kotler, 2011). In addition, DuPont has focused on producing sustainable materials to serve their market with the aim toward reducing environmental pollution (Hart, 1995, Kotler, 2011). In this regard, corporate environmentalism can be demonstrated through their actions toward the idea of being green/environmentally-friendly as well as engaging with environmentally-oriented principles. This is to safeguard companies' efforts to meeting their objectives of being socially and ecologically responsible as well as acting in accordance with governmental regulations e.g. (Menon and Menon, 1997; Baker and Sinkula, 2005).

Although research to date presents a wide range of drivers that work in influencing firms' environmental strategies and actions in order to understand the effect of different set of motivations to the adoption of such environmental practices e.g. (Paulraj, 2009, González-Benito and González-Benito, 2005), it is significant to gain an insight into the good causes of business practices (antecedent effects) that drive the exemplary green industry firms' environmental responsiveness to promoting community involvement. To what extent the collaboration is being shaped, how it is being shaped and what their anticipated outcomes are concerned with are the main focus of this paper. In particular, the collaboration between corporate (among the representative green industry firms of Thailand) and community engagement (where they belong) which can be viewed as the main driver or pragmatic approach toward accomplishing sustainable development performance, is still under-researched. In fact, this missing puzzle could accelerate the urgency of companies' accountability to advancing environmental sustainability prospects in accordance with their business practices.

Based on the research gap, this paper attempts to explain and draw a framework of the exemplary green industry firms of Thailand through the collaboration between corporate and community practices. This is done by elaborating the antecedent effects which are grounded on the insights of corporate environmental responsiveness (Bansal and Roth, 2000). Also, it offers some collaborative corporate-community practices as one pragmatic approach to achieving sustainable development goals.

2. Research Objectives

The primary objectives of this paper are: 1) to suggest the exemplary role of green industry firms of Thailand through the collaboration between corporate and community practices; and 2) to determine antecedent effects of the collaborative corporate-community practices and the anticipated outcomes toward sustainable development performance.

3. Research Methodology

3.1 Research Design

In green industry context, it is possible to see evidence of firms' vision toward sustainable development performance as their mission and policies regarding corporate social responsibility and stakeholder management which are clearly stated and being implemented. In global view, green industry has been widely recognized throughout developed countries following the declaration of World Summit of Sustainable Development (WSSD) since 2002. Meanwhile Thailand green industry has been launched in 2011, with the aim to reaffirm the route toward sustainable development, as outlined in the WSSD, Johannesburg (2002) and the Manila declaration on Green Industry in Asia (2009). To be more precise, the Ministry of Industry of Thailand kicked off 'Green Industry' in order to promote the "Five-Leveled Green Industry" throughout all manufacturing and industrial sectors. The five-leveled Green Industry consists of level 1: green commitment; level 2: green action; level 3: green system; level 4: green culture; and level 5: green network. Within the Green Industry categorization, companies are allowed to progress step by step toward greening process achievement and certification. Therefore, it is needed to not only give encouragement and lessons but must also highlight the role models or exemplars which other corporations could emulate. This study, therefore makes such contribution to the insights and the call for supporting such campaign for a wider acknowledgement.

3.2 Sample and Data Collection

The targeted samples are companies listed in Green Industry of Thailand at the highest category or the fifth level: Green Network. In essence, Green Network is referred to the category of firms which advocate and ally with their green partners through supply chain management, while encouraging and working in collaboration with community where they belong. Those firms deploy environmental strategies, implement environmental management throughout their operations as the foundation, and accomplish green networking certification. The selected firms represented diverse manufacturing and industrial sectors such as Oil and Energy, Mining, Chemicals, Cement and construction materials and consumer products which are classified as major corporate environmentalists of Thailand. Given the attributes of environmental responsiveness as the foundation that drives company's environmental actions, the representative green industry firms are well represented as the sample of the study.

Seven representatives from companies (registered in Green Industry of Thailand) who have been chosen through purposive sampling because of their reputation for safeguarding the natural resources and the environment were interviewed. This study was conducted using semi-structured interviewing technique. These informants came from such industries as petroleum, oil & gas, rock-mining, cement construction, chemicals and house-hold products and were either the CEO or a senior executive. Interview with each informant lasted for about ninety minutes and was recorded for analysis. Because this is an exploratory study that is intended to generate insights, the interpretive data analysis technique was employed. This method enabled the researcher to verify the implications of their findings, as such the outcomes are applicable and situated within “socio-historical and scientific context” (Elliott and Timulak 2005).

4. Research Analysis and Findings

4.1 Data Analysis

Regarding the interview questions, the fundamental questions are: 1) as being registered in the fifth-leveled green industry of Thailand, how your corporate would deal with the environmental regulations and community scrutiny, 2) to what extent the motivations that drive corporate environmental actions are, and 3) what the anticipated outcomes of being environmental stewardships are. To be consistent with the rigorous qualitative data analysis method, the interview transcripts were examined by a coding system (Wester et al, 2001). The researcher interpreted the data in line with the past study of corporate environmental responsiveness (Bansal and Roth, 2000) in order to derive meaningful findings. The data was analyzed and simplified as follow: firstly, all informants from different companies and industries have responded in the same way that as being registered in the fifth-leveled green industry of Thailand, corporates would have to carefully communicate with, and take part in community where they belong. Many collaborative corporate-community practices have been initiated and developed not only to promote the living conditions of community but also to encounter environmental incidents that may occur in association with the governmental regulations. The purpose of such collaborations is to oblige to preventive environmental degradation scheme, and to propose as a practical guiding framework between corporate and local community.

Next, the informants were asked about to what extent are the motivations that drive corporate environmental actions and what are the expected outcomes, the researcher grouped the data and categorizes it into three different motivations including: regulation (legitimacy), competition (competitiveness), and environmental responsibility (ecological responsibility). This inducement, in other words, can be regarded as antecedent effect that drives corporate environmental actions, particularly the collaborative-practices between firms and the community where they exist. In essence, the first factor concerning the conformity to the environmental regulation reflects corporate environmental actions that are in line with legitimation (Bansal and Roth, 2000). Firms are highly expected to comply with strict environmental regulation which in turns perpetuate

environmental commitment. In other words, the informants reaffirmed their commitment to persevering ecology which reflects their actions toward enhancing environmental responsibility. In addition, the informants stated that in order for green industry firms to be competitive in a long-term basis it is necessary to be aware of the natural environment by creating such green campaigns and initiatives to attract wider society. With this in mind, they consider competitiveness and ecological responsibility are part of the motivations toward the collaboration between corporate and community practices. This in turn results in becoming leader's role (role model) of corporate environmental stewardship in the industry. As a result of all the endeavor, the expected outcome is to achieve sustainable development performance. Specifically, pragmatism of the collaboration between corporate and community practices can be viewed as path-way toward sustainable development performance.

4.2 Research Findings

Provided the above insights from data analysis, the researcher draws upon the firms' environmental responsiveness—the corresponding motivations toward corporate ecological responsiveness that suggests differentiated features which resulted by discrimination among attributes of ends, means, constituent focus, decision analysis, decision rule and strategic posture (Bansal and Roth, 2000). In this study, the antecedent effects of collaborative corporate-community practices are identified as follow: 1) competitiveness, 2) legitimacy, and 3) ecological responsibility. As such, these infer changes made onto products, processes, and policies e.g. reducing energy consumption and waste generation, implementing ecologically sustainable resources and deploying environmental management system (Bansal and Roth, 2000). Figure 1 demonstrates a model of exemplary green industry firms of Thailand through the collaborative corporate-community practices.

Firstly, competitiveness (or competitive advantage) which can be gained by being environmentally responsible in business practices, is defined as firms performing ecological responsibility with their vision, while developing and enhancing a long-term profitable goal on the basis of their business practices. Toward advancing competitiveness, firms are bound to implement energy and waste management as well as cost reduction strategies which would lead them to improve higher output for the same inputs (or process intensification) (Bansal and Roth, 2000). Meanwhile the development of eco-products, eco-labelling and green marketing are also beneficial for firms to gain competitive advantage (Kotler, 2011).

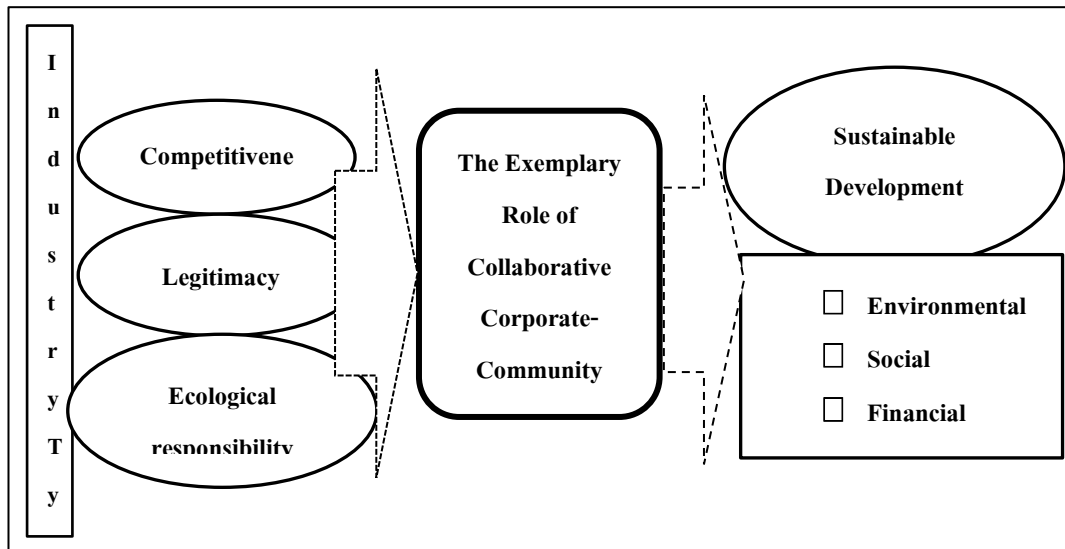


Figure 1 A Framework of Exemplary Green Industry Firms of Thailand through the Collaborative Corporate-Community Practices

For instance, rock mining companies make effort to reduce dust that spread out to the nearby community.

In addition, results from the interview show that corporates as the initiator of such practices are concerned with the way in which they would become more competitive in the industry to which they belong. Thus, in view of competitiveness particularly in green industry context, the exemplary firms in the following industries such as Oil, Chemicals and Consumer goods sectors are well aware of the production process within their operations, and attempt to promote eco-values as well as develop green products to satisfy consumers. Not only do they have to comply with environmental regulations regarding the requirements for each industry category, but they also have to pro-actively respond and voluntarily develop more practices concerning their business to maintain cost efficient, improve profitability by utilizing an effective system and production. Moreover, they become the first mover to initiate collaborative practices/activities with community where they exist in order to gain the first-mover advantage over other competitors in the industry. In this regard, the collaborative practices designated their exemplary role in the green industry. The anticipated outcomes are made possible through different aspects. For example, green process of production to be cost-efficient would help improve firms' financial circumstances; while promoting eco-values would lead firms to enhance their social recognition for wider acceptance, and the development of green product would be beneficial for firms to align with environmental sustainability. The result of this becomes prominent toward attaining sustainable development goals on a long-term basis.

Next, legitimacy refers to the government environmental regulations which aims at enforcing corporate to conform in accordance with the green industry certification and authority. In practice, the role model of representative firms has been witnessed through their actions to monitoring such air, noise and water pollutions which are created by their operations. Meanwhile the communities are bound to help scrutinize the contaminated environment caused by corporations. As evident in the interview, the representative green industry firms have followed appropriate standards required by the authority to restrain waste outputs before releasing it to the natural environment. They also have to help control air pollution caused by the operation such as a collaborative project called dust-free road monitoring under rock mining firms.

In essence, rock mining and cement (raw material for construction) companies are seen as high-risk of damaging natural environment. They have been subject to by intensive environmental restriction. This reflects the extent to which the motivation toward green practice taking such concern by law. Nonetheless, these firms not only voluntarily represent as pro-active environmentalist beyond the compliance of governmental environmental legislation but also strictly follow the instructions to comply with corporate social responsibility. For example, a chemical company monitors its water outputs by a recycling and reused system within its factory as stated in its CSR policy in order to minimize the environmental impact on the surrounded communities. In this regard, the exemplary green industry firms have taken action achieving sustainability by initiating such activities as reducing air-pollution and dust generated by the manufacturing operations, planting trees in the factory and promoting reforestation programs in nearby communities, and implementing measures for control-of CO₂ and gas emission to the environment, as well as putting in place measures for manufacturing waste management. These can be said to be pragmatic sustainable development performances concerning the care for natural environment and community/social responsibility.

Last, ecological responsibility (the concern about natural environments which have impact on society/community where the company exists) involves companies to engage with environmental issues whilst advocate environmental interest groups and activities including broader stakeholders e.g. (Brown and Dacin, 1997, Mohr and Webb, 2005, Ellen et al., 2006). In other words, the commitment to social obligations based on environmental issues can be said to bring environmental image to the firms. Developing communication with the public and responding on emergency to environmental predicament would provide environmental reputation for their business. This in turn would satisfy wider stakeholders for their long-term growth in the business as well as attain corporate sustainable development performance. It also improves the corporate image in correspondence with the needs of society/community where it belongs and survives (Ellen et al., 2006). Furthermore, companies that involve CSR as an instrumental approach by their own interest would see long term benefits, gain stakeholder satisfaction, and enhance employees' retention and motivation, as well as maintain cost reduction and operating efficiency (Agudo Valiente et al., 2012).

As evident from the field interview, in order to address antecedent effect of ecological responsibility the representative green industry firms have revealed their aim toward achieving zero-land-filled waste management. They create an outstanding activity with the community which is called “One-Manager-One-Community” (OMOC) program in order to help monitor environmental problems in the community. They also kicked off “Green Turn-Around” campaign in order to support environmental preservation. Moreover, they sponsor community activities with such philanthropic financial supports such as funding for children education and local community scrutiny on the natural environment. According to this, such role model of green industry firms is well acknowledged as practical approach toward accomplishing sustainable development performance in terms of reaching environmental, social and financial prospects.

5. Conclusion

This paper determines antecedent effects of the collaboration between corporate and community practices that are in line with the firms’ motivation toward environmental responsiveness. It also proposes a framework of exemplary green industry firms of Thailand based on their collaborative practices. The findings provide the insights into why and how green industry firms are prone to be pro-actively expressing their desires toward accomplishing sustainable development goals. In this study, the three elements including competitiveness, legitimacy and ecological responsibility are addressed and validated as the antecedent effects; meanwhile the collaborative corporate-community practices can be viewed as practical approach toward achieving sustainable development performance on the basis of social, financial and environmental prospects. Particularly, the inducement to react and respond to environmental responsiveness by green industry firms can as well be seen as awareness in which reflects in their environmentally-friendly behaviors and commitment.

6. Implications, Limitation and Recommendation

This study makes several contributions and suggests implications for managers and researchers as follow. First, it builds on the insight of corporate environmental responsiveness by describing the antecedent effects of the collaborative corporate and community practices. Next, it proposes the framework for attaining sustainable development performance of exemplary green industry firms of Thailand. Particularly the representative firms and their role model can be applied to managerial practice in different aspects. First, the collaborative corporate-community environmental practices can be regarded as pragmatic approach for corporations to better understand the possibility to accomplishing sustainable development performance. Second, stakeholder (community) engagement is significant when firms are bound to be responsible for their environmental actions by complying with the government’s regulations. In addition, green industry is considered as a mechanism for promoting environmental sustainability for the sake of the whole society. This can also be viewed as building mutual trust and agreement between the industry and communities to meet the sustainable development goals.

Besides, this paper has its limitation. As it is an exploratory paper, it aims to put forth the exemplary green industry firms of Thailand by describing the significant impact of collaboration between corporate and community practices. This is limited to describing some major representative firms of green industry only. For further research, it might be an opportunity to gain wider participants from the green industry firms. In addition, the three elements of antecedent effects that drive the exemplary role of green industry firms are necessary to be explored to see whether they could be implemented to attract non-green businesses to partake in the green industry.

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SOCIAL ENGAGEMENT IN OFFICIAL FACEBOOK OF BANGKOK UNIVERSITY, UNIVERSITY IDENTIFICATION, AND ACADEMIC PERFORMANCE AMONG BANGKOK

Cong Luo

Master of Communication Arts (Global Communication)

Graduate School, Bangkok University

Email: luo.cong@bumail.net

Advisor: Asst. Prof. Dr. Pacharaporn Kesaporn

School of Communication Arts, Bangkok University, Thailand

Email: pacharaporn.i@bu.ac.th

ABSTRACT

The research aimed to investigate the relationships among students' social engagement in Official Facebook of Bangkok University (BU), university identification, and their academic performance among Bangkok University students. Two hundred BU students who had Facebook accounts participated in the study by using convenience sampling methods. The mean, standard deviation, and percentage were being tabulated, and Spearman Rank Correlation was employed to test the correlation with the significance level of .05. The results revealed that BU students' frequency of social engagement in BU Official Facebook page was positively correlated with their identification to BU ($r = 0.312^{**}$, $p < .01$), including similarity ($r = 0.311^{**}$, $p < .05$), membership ($r = 0.211^{**}$, $p < .05$), and loyalty ($r = 0.189^{**}$, $p < .05$) at statistical significance of 0.05; however, their frequency of social engagement in BU Official Facebook page was not significantly correlated with their academic performance. In addition, there was no significant correlation between samples' identification with BU and their academic performance. None of dimensions of identification with school including membership, loyalty and similarity, was correlated with academic performance.

KEYWORDS: Social engagement, Facebook page, Identification with university, Academic performance, Bangkok University

1. Introduction

Every young university student has been used to serve the Internet on a daily (Jones, 2008). For universities while facing increasing competition, social media is believed as a new communication tool to present

its image to students and constituents (Peruta, Ryan, & Engelsman, 2013). Facebook has been used to open the communication lines between students and universities by informing them of college events and other collegiate activities (Roblyer, McDaniel, Webb, Herman, & Witty, 2010). Therefore, it is important for higher education professionals to understand the implication of college official Facebook page usage. Two correlated factors including identification with university and learning performance are examined in this study.

Based on the cultivation theory (Gerbner, Gross, Morgan, & Signorielli, 1986), we can assume that students who engaged in Facebook will be exposed to school-related contents that shape their perceptual, psychological, and behavioral effects on students. In this study, BU students' identification with university needs to be discussed. College as a specific organization, the identification effects the extent to intimacy with school, the level of satisfaction with school and students' school performance.

Most of the past studies about Facebook examined the relationship between college students' interaction and behaviors in Facebook and its effects from the marketing aspect, rather than from the academic performance of the students. A few past studies have found that the relationship between students' Facebook use and the social capital of students (Ellison, Steinfield, & Lampe, 2007; Valenzuela, Park, & Kee, 2009). O'Brien (2011) investigated the Internet use and the learning performance of university students and found no significant relationship between Facebook usage patterns and academic performance which challenges previous claims about the negative relationship between Facebook use and grades as presented in preceding text. Valkenburg, Peter & Schouten (2006) found that adolescents using the friend networking site (e.g., Friendster, MySpace) had an indirect influence on self-esteem and well-being.

Generally, academic performance is an important aspect of student behavior in school. Several studies have showed that the factors of school identification are correlated with school learning behaviors such as classroom and academic achievement (Finn, 1989; Steel, 1992). Identification can be described as a kind of attachment between individual and groups, such as religions, school or nation. Tajfel (1978) developed social identity theory, social identity was defined as "individual recognizes that he or she belongs to a specific group, and perceives value and affection from the group as a group member." And, he suggested there were three dimensions of social identity, including cognition, emotion, and evaluation. Accordingly, organization identification was discussed broadly. Based on the three dimensions' social identity theory, the behavioral aspect of identification has added as fourth component to measure organization identification, such as "I support the in group" (Jackson, 1999).

In this study, BU students' identification with university or school identification needs to be discussed. For higher education, students' identification with college is an important issue that should be concerned. Based on the theory of social identity and organization identification, College as a specific organization, the identification effects the extent to intimacy with school, the level of satisfaction with school and students' school performance. The researcher used Organizational Identification Questionnaire (OIQ) is employed to measure

students' university identification. The Cronbach Alpha of 0.94 was reported by Cheney (1983) and Potvin (1991) reported an alpha of .96 in three different organizations.

Cheney suggested that organizational identification consists of 3 dimensions: membership, loyalty and similarity. These 3 components are not "analytically distinct". Membership refers to "feelings of solidarity"—a sense of belonging, strong feeling of attachment or emotional attraction, reference to self in organizational membership, and pride in organizational membership; loyalty refers to "support of the organization" and loyalty to the organization and enthusiasm about organizational goals; and similarity refers to "perceptions of shared characteristics"—perceived similarity in terms of shared characteristics and with respect to shared values or goals (Cheney, 1983). Grade Point Average (GPA) is used to measure academic achievement in this study. The researcher would like to fill in the knowledge gap whether their social engagement in the University Facebook is correlated with their identification and/ or is correlated with their academic performance.

2. Research Objectives

2.1 To investigate how students' frequency of social media engagement in BU Official Facebook positively correlated with their identification to BU.

2.2 To explore how students' frequency of social media engagement in BU Official Facebook positively correlated with their academic performance.

2.3 To examine the correlation between BU students' identification with school and academic performance.

3. Research Framework

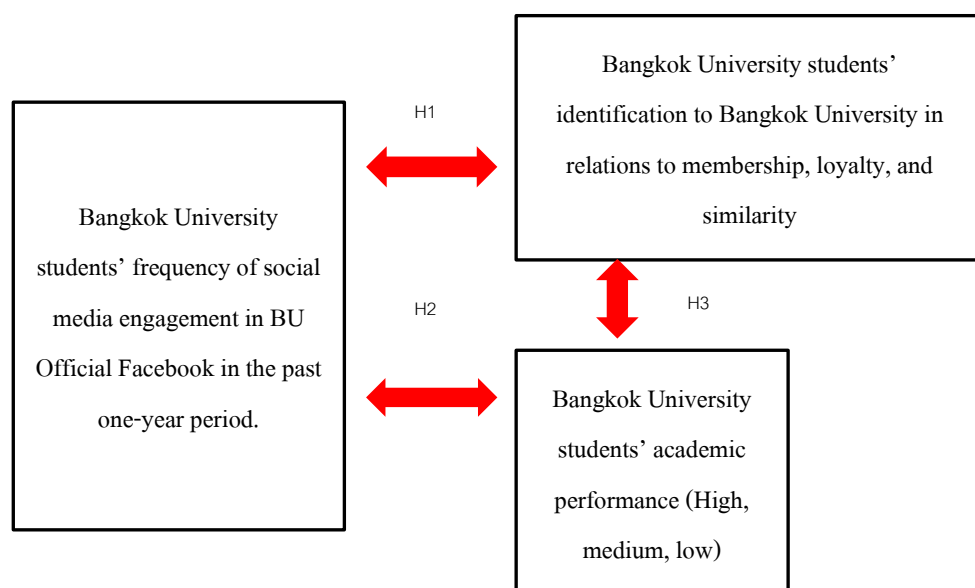


Figure 1 Research Framework

4. Research Methodology

4.1 Research Design: This is a survey research that examined the influence of Bangkok University students' social engagement in BU Official Facebook on their identification and academic performance.

4.2 Population and Sample: The population was Thai Bangkok University full-time students who were currently studying in the Bachelor's degree and were Facebook users. Two hundred respondents were selected using convenience sampling and they were asked to fill in the online survey.

4.3 Variables: The independent variables were (1) Bangkok University students' frequency of social media engagement in BU Official Facebook in the past one-year period; (2) intervening variables were Bangkok University students' identification to Bangkok University in relations to membership, loyalty, and similarity; and (3) dependent variable was Thai Bangkok University students' academic performance.

4.4 Research Instrument: There are 4 parts in the questionnaire. The first section had 3 nominal- and ordinal scale questions, asking about the gender, major, years of study. The second section had two parts. Part I had two ordinal-scale questions, inquiring about the frequency of using BU Official Facebook in the past one year period. And, Part II had 9 Likert-scale questions, asking about the frequency of their social engagement in BU Official Facebook. Section III had 23 Likert-scale questions, measuring the students' university identification after using BU Official Facebook. In this section, Organizational Identification Questionnaire (OIQ) was employed to measure students' university identification. The Cronbach Alpha of 0.94 was reported by Cheney (1983) and Potvin (1991) reported an alpha of .96 in three different organizations. Cheney suggested that organizational identification consists of 3 dimensions: membership, loyalty and similarity. Section IV had one ordinal question asking them to inform their GPA.

4.5 Data Collection: The data collection was conducted from April – June, 2018, by using convenience sampling.

4.6 Data Analysis: Hypothesis 1, Hypothesis 2, and Hypothesis 3 used Spearman Rank Correlation Analysis to test the hypothesis

5. Research Findings

5.1 Summary of Descriptive Results

The descriptive findings revealed that the majority of the samples who have responded the survey were female students. The ratio of female students to male students is 6 to 4. Furthermore, the majority of the samples are from Humanities and Tourism Management (40.5%, n=81) with year 2 (42%, n=84).

The descriptive finding also found that majority of the samples rarely visited BU Facebook (37%, n=74), and second most respondents sometimes visited BU Facebook (34%, n=68). These two portions are more than half of the samples, which indicated that Bangkok university students didn't visit BU Facebook page often.

When analyzing the time that spent on exploring, the descriptive findings showed that almost half students spent 5-15 minutes (49.5%, $n=99$), which followed by less than 5 minutes (33%, $n=66$). And only 19 students spent more than 30 minutes on it. (9.5%, $n=19$). That can be concluded that students didn't spend too much time on exploring BU Facebook, usually less than 15 minutes.

The descriptive findings showed that the means of sharing posts (Mean=3.07, SD=1.130), checking in location (Mean=3.06, SD=1.185), looking at the albums (Mean=3.09, SD=1.076) and clicking "Like" or choosing "Emotion" (Mean=3.20, SD=1.152) are more than 3, which mean the samples sometimes shared posts, checked in location and click "Like" or chose "Emotion". While, the means of making positive comments (Mean=2.93, SD=1.223), downloading the contents (Mean=2.83, SD=1.144), making comments (Mean=2.65, SD=1.214), posting content (Mean=2.49, SD=1.195), making negative comments (Mean=2.36, SD=1.252) are below 3, which mean that samples sometime downloaded the contents, made positive comments to express their views but rarely post contents and made negative comments. In overall, that can be concluded that students prefer engaging in BU Facebook in effortless and fast way without deeper interactions.

5.2 Summary of Hypothesis Testing

Hypothesis 1 was supported. The statistic revealed that there was middle positive correlation between samples' frequency of engagement in BU Facebook and university identification ($r=0.312^{**}$, $p<.01$) in Table 1. When analyzing the correlation between Facebook engagement and each dimension of identification in Table 2, the Spearman Rank Correlation revealed that samples' frequency of BU Facebook engagement is positively correlated with their similarity ($r=0.311^{**}$, $p<.05$) in middle level, membership ($r=0.211^{**}$, $p<.05$), loyalty ($r=0.189^{**}$, $p<.05$) in low level, respectively.

Hypothesis 2 was unsupported. The statistic revealed that respondents' frequency of social media engagement in BU official Facebook page did not significantly correlate with their GPA ($r=-.027$, $p>.05$) in Table 1. In respects to detailed Facebook engagement, Table 1 dedicated that none of item of Facebook engagement significantly correlated with GPA ($p>.05$).

Hypothesis 3 was not supported. The statistic revealed that samples' identification with university did not significantly correlate with academic performance (GPA) ($r=-.062$, $p>.05$). According to Table 4.5, membership ($r=-.050$, $p>.05$), loyalty ($r=-.020$, $p>.05$) and similarity ($r=-.025$, $p>.05$) were not significantly correlated with academic performance in Table 2.

Table 1 Correlation among BU students' frequency Facebook engagement, identification with school, and academic performance

		FB Engagement	Identification	GPA
FB Engagement	Correlation Coefficient	1.000	.312 **	-.027
	Sig. (2-tailed)	.	.000	.707
Identification	Correlation Coefficient	.312 **	1.000	.062
	Sig. (2-tailed)	.000	.	.402

Note: Correlation is significant at the 0.05 level (2-tailed) **

Table 2 Correlation among BU students' frequency Facebook engagement, loyalty, similarity, and academic performance

		FB Engagement	Membership	Loyalty	Similarity	GPA
FB Engagement	Correlation Coefficient	1.000	.211 **	.189 **	.371 **	-.027
	Sig. (2-tailed)	.	.003	.008	.000	.707
Membership	Correlation Coefficient	.211 **	1.000	.762 **	.595 **	.050
	Sig. (2-tailed)	.003	.	.000	.000	.488
Loyalty	Correlation Coefficient	.189 **	.762 **	1.000	.720 **	.020
	Sig. (2-tailed)	.008	.000	.	.000	.785
Similarity	Correlation Coefficient	.371 **	.595 **	.720 **	1.000	.025
	Sig. (2-tailed)	.000	.000	.000	.	.733

Note: Correlation is significant at the 0.05 level (2-tailed) **

6. Discussion

There was no past study which examined the relationship between social engagement in Facebook page and university identification. The results coincided with the cultivation theory, which posited the long-term formation and shaping of perceptions, understandings, and values about the world as a result of consumption of media message (Gerbner & Gross, 1976). The higher frequency of engagement, the stronger sense of attachments between students and BU, the higher similarity they perceived in respects to shared characteristics, the more supports towards BU's career. In other words, the higher frequency of social media engagement, the higher level of identification students will have with their university including membership, similarity and loyalty.

Hypothesis 2 results coincided with O'Brian (2011) because there was no significant relationship found between social engagement in Facebook and academic performance. Intelligence is the single most powerful predictor of academic performance, cognitive and non-cognitive factors are significant to academic performance (Von Stumm, Hell, Chamorro-Premuzic, 2011; Hannon, 2004; Gutman & Schoon, 2013). According to Uses and Gratification theory (UGT), the contents in BU Facebook did not support needs of students in content gratification that aim to promote cognitive skills of students which is an important component of their studying performance. BU Facebook did not provide essential contents that promote the intelligence, cognitive skills, and non-cognitive skills such self-efficacy Academic performance. Hence, there is no significant relationship between social engagement in Facebook and academic performance.

The results of non-significant relationship between school identification and learning performance challenged the previous studies which claimed students who were identified with school should be more motivated to success academically, and thus more likely to experience positive academic outcomes such as higher grades (Osborne, 1997; Walker, Green & Mansell, 2006). When analyzing the reasons causing differences, the reason of factors predict the academic performance was considered. Cognitive and non-cognitive factors are significant to academic performance. Cognitive factors refer to the extent to which a person's individual capabilities can influence their academic performance, such as self-efficacy Non-cognitive factors or skills refer to a set of attitudes, behaviors, and strategies that promotes academic and professional success (Von Stumm, Hell, Chamorro-Premuzic, 2011; Hannon, 2004; Gutman & Schoon, 2013). Students who have higher level of identification with university may are more interested in participant in university activities (Finn, 1989), but do not transform into motivation or positive attitude, which are predictors to academic performance.

In conclusion, this study contributes to the understanding of college students' social media engagement, their identification with university, and their learning performance. Since Facebook has played significant role in terms of opening the communication lines between students and universities by informing them of college events and other collegiate activities (Roblyer, McDaniel, Webb, Herman, & Witty, 2010). It is necessary to investigated students' online engagement in their Facebook page and its related influence. Section of Facebook engagement of questionnaire considered the online behaviors would occur in an official page, such as posting content, making

comments, checking in the location and looking through the photos and so on. Use and Gratification theory and media dependency were employed to understand the motivation of BU students to engage in BU Facebook page. They have information needs to process the information or news about university.

Identification with university is the key variable that examined as a correlated factor with social media engagement. Identification with school is defined in this study as a sense of belongingness, having strong feeling of attachment or emotional attraction with university, loyalty and perceived or sharing similar values or goals with university. It was considered as three dimension, including membership, loyalty and similarity (Cheney ,1983). Cultivation theory was used to understand the positively correlation between BU students' frequency of Facebook engagement and their identification with school. A long-term media consuming would shape and effect the value of consumers (Gerbner & Gross, 1976). The hypothesis 1 confirmed that more engagement in BU Facebook page, the higher identification of students has with BU. Identification with school led to an increase in the quality, as well as the quantity of students' participation in school activities (Finn ,1989). Accordingly, BU could take advantage of Facebook as a communication channel in order to connect with students as well as improving their identification with BU.

However, in respect to the correlations between students' engagement in BU Facebook and academic performance and identification with university and learning performance, there was no significant correlation found. Hypothesis 2 and hypothesis 3 are not supported. The findings reveal that there are other factors predicting academic performance. Accordingly, BU administrators may consider post the contents that support the contents needs of students, which aim to improve the cognitive factors that are the important components for academic performance

7. SUGGESTIONS

7.1 Suggestions for Further Application

(1) BU management department should give more importance to Facebook in the daily operation. There should be a responsible admin to interact with users. News with literal, photos or videos need to be updated in real-time. In addition, contents should be edited to be more attractive in order to call in more engagement.

(2) BU administrators may consider posting content which meet the content needs of students that are benefit to the learning skill in order to improve academic performance. Such as inviting students sharing their learning skills in BU Facebook so that students learn from each other.

(3) BU students who identified with BU may have higher enthusiasm in participating school events. Accordingly, BU administrator may consider organize the events that aim to promote the learning skills in order to improve students' academic performance.

7.2 Suggestions for Further Research

(1) A similar study can be conducted in other universities rather than Bangkok University. Whose social media platforms are used as communication channels to spread information and news of college-related events.

(2) There are more than one scales can be used to measure the dimensions of identifications with university. The different instruments might result in outcome differently.

(3) This kind of research also can be applied in organizations, such as corporate communications. The relationship among employees' engagement in their official Facebook, organization identification and working performance is worth to study.

(4) This kind of research requires more time in order to collect the data properly because some of respondents are not in the ready condition to fulfill the questionnaire with high number of questions.

(5) The functions of university's official social media platforms play significant role increasingly. More related studies could be conducted to examine the roles of official Facebook page.

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**EXPOSURE TO CHLOE PRINT ADVERTISEMENT, BRAND EQUITY,
CUSTOMER SATISFACTION, AND THEIR INTENTION TO PURCHASE
AMONG THAI CUSTOMERS**

Gao Yang

Master of Communication Arts (Global Communication)

Graduate School, Bangkok University

E-mail: wsrf0629@hotmail.com

Advisor: Asst. Prof. Dr. Pacharaporn Kesaporn, Ph.D.

Email: pacharaporn.i@bu.ac.th

ABSTRACT

This survey research aimed to investigate the relationships among customers' exposure to Chloé's commercial of TV advertisement with their brand equity and their intention to purchase Chloé products. The samples were Thai and non-Thai customers whose age were over 18 years old. Two-hundred customers of Chloé were selected to participate in this survey using purposive sampling and convenience sampling method. The means, standard deviation and percentage were being tabulated and analyzed using T-test, One-Way ANOVA, and Multiple Regression and Correlation with the significance level of .05. The result revealed the following points: Firstly, 40% of customers said that they were exposed to Chloé advertisement frequently in the past one year period. They perceived the brand equity positively and they had high satisfaction toward brand Chloé and had high intention to purchase Chloé. Secondly, customers' exposure to advertisement of brand Chloé significantly influenced their perceived brand equity of Chloé, including brand awareness, brand association, perceived quality, and brand loyalty, respectively. Thirdly, the samples' perceived brand equity and customers' satisfaction are significant predictors of their intention to purchase Chloé products. Customers' perceived brand equity was advantage predictor of customers' behavioral intention to purchase than their satisfaction toward the products.

Keywords: Chloé, brand equity, Exposure to Chloé's commercial advertisement, customer satisfaction, purchase intention.

1. Introduction

With the rapid development in Thailand's economy, there was an increasing consumption of luxury products among Thai customers. Luxury products have gradually become an essential part of Thai lifestyle. Thailand's middle class is one of the pillars of its economy and a major force in luxury purchases. With a stable economic source and economy, and the ability to purchases, Thailand's luxury market is growing year by year. For the middle class, buying luxury goods is part of the quality of life. Luxury goods are not only the embodiment of lifestyle but also the manifestation of self- taste. Luxury goods are also attractive and encouraging to young people. Factors such as the first job or the first gift of life and so on that make Thai consumers buy luxury goods. Luxury goods have become a part of life for Thai consumers. Most importantly, luxury industry played a significant role in the Thai economy, because it is the one of pillars of Thailand's economic development.

Chloé is a French luxury fashion house founded in 1952 by Gaby Aghion. Aghion later joined forces with Jacques Lenoir in 1953(Chloé, 2014). As a luxury brand Chloé already use advertisement to promotion products in Thailand. Thailand is experiencing the growth in the luxury due to following changing phenomena as follows: (1) Local Thai people's purchasing power is increased; (2) A shift in global mindset among Thai customers; (3) Local brands are growing faster; (4) Social media celebrities push.

Based on these changing phenomena, there is an urgent for luxury brand to create brand equity in order to increase customers' intention to purchase. Brand equity shows difference in price in which a strong brand is attracted in its sale in comparison with a medium brand (Aaker, 1996). Moreover, brand equity, supporting customer's value, indirectly increases the value of the company. Brand equity and customer's value through increasing "effectiveness and efficiency of marketing plans, brand loyalty, price and profit margin, brand development, business leverage and competitive advantage" give value to company (Aaker, 1996). Thus, advertising has been used as a strategy to create the value of the product to meet the expectation of the customers. The relationship between brand equity and advertising is the relationship between development and presentation. Advertising is the most direct and most simple way to promotion brand and the brand through advertising let consumers and investors understand the brand, know brand logo, design and the brand want to show to consumers for every season's brand concept and designers' concept. Advertisement help generate brand equity, advertisement connect the customers with the brand contents and brand contact points.

Most past studies have confirmed the impact of advertisement and brand equity on customers' loyalty (Javadi, Allameh, & Poursaedi, 2014; Makasi, Govender & Rukweza, 2014). Javadi, Allameh, & Poursaedi, 2014 found that advertisement affect all brand equity dimensions, including salience, performance, image, judgments, feelings and resonance have had a significant and positive impact on its customer loyalty to the Isfahan city and the university in Zimbabwe. Makasi, Govender & Rukweza (2014) examined the impact of advertising on building brand equity in Zimbabwe's Tobacco Auction floors and found that advertising affects brand awareness, brand loyalty, brand association and perceived quality. Satvati, Rabie & Rasoli (2016) examined to

investigate the relationship between brand equity and consumer behavior. They revealed that there is a relationship between brand equity and consumer behavior including paying extra cost, brand preference and purchase intention. Budiarti, Djumilah & Hawidjojo (2013) found that consumer satisfaction has strong influence to consumer loyalty compared to brand equity, advertisement, and service quality. Brand Equity and customer satisfaction as the mediation of advertisement influence and the Service Quality to Loyalty the Passengers of International Flight at Garuda Indonesia Airlines. Most of the past studies explored the impact of advertisement on brand equity of university, airline, and product- manufacturing company but very limited studies had examined the relationship among advertisement and brand equity on customer satisfaction and decision to purchase in the luxury which has high potential for growth in Thailand.

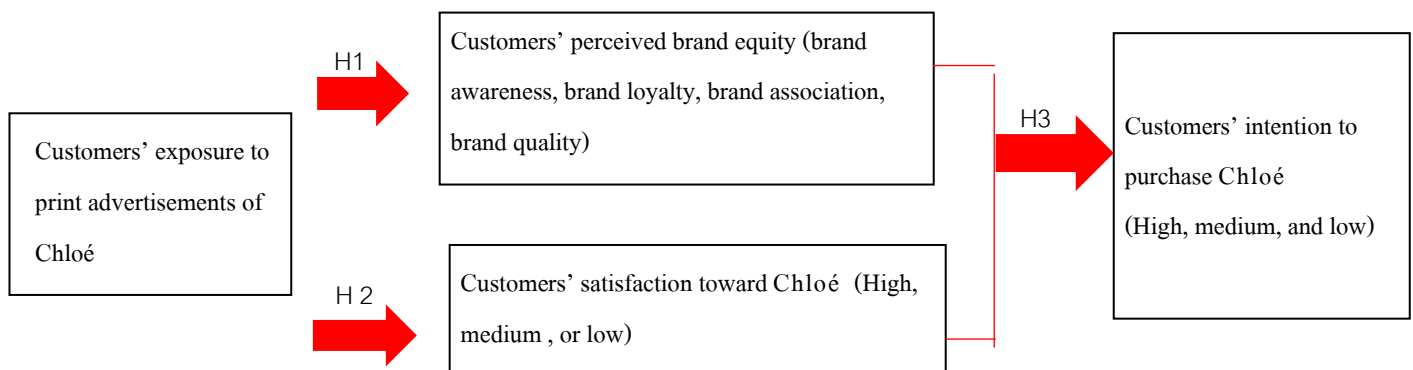
2. Research Objectives

(1) To examine the influence of exposure to Chloé print advertisements on brand equity of Chloé as perceived by the Thai and non-Thai customers.

(2) To examine the influence of exposure to Chloé print advertisements on satisfaction toward Chloé as perceived by the Thai and non-Thai customers.

(3) To predict whether customers perceived brand equity and satisfaction toward Chloé are significant predictors of their intention to purchase Chloé products.

3. Theoretical Framework



4. Methodology:

4.1 Research Design: This research will use quantitative research approach to collect the data information to examine Thai prospect customers' frequency of Chloé advertisement exposure on their perceived brand equity, customer satisfaction, and customer decision to purchase the brand.

4.2 Population and Sampling: Two hundred Thai aged 18-49 years old were selected using convenience sampling. They are prospect Thai customers who have been exposed to Chloé advertisement in the past one year period. These age groups were chosen because Chloé product is a global brand that is marketing in

Thailand and these ages was the main target of Chloé company. Although Chloé product targeted at female customers, because they did not have men's collection; however, male customers are often the frequent buyers for their significant others in special occasion in the past few years. Samples are those customers who are females aged 18-49 years old living in the middle class society, because Chloé are expensive. Chloé's "See By Chloé" collection is aimed at young females. Females that would shop in the "See By Chloé" collection would be aged 18-25 years old (Chloé, 2014). Thus, the study explored both female and male customers who have financial affordability and have been to Chloé advertisement.

4.3 Variables: (1) The independent variable was the frequency of Chloé print advertisement exposure in the past one year period among prospect customers of Chloé; (2) the intervening variables were their perceived brand equity having five key constructs, including brand awareness, brand loyalty, brand association, brand quality and the customers' satisfaction; and (3) the dependent variable was customers' intention to purchase Chloé product.

4.4 Research Instrument: There were 4 sections in this survey. Part I had 6 nominal-and-ordinal questions, asking gender, age, marital status, educational level, occupation, and personal income per month. Part II had 6 nominal-and-ordinal questions, asking media exposure to Chloé print advertisement. Part III had 19 Likert-scale questions, probing about respondents' Brand Equity, having five key constructs, including brand awareness, brand loyalty, brand association, brand quality. Part IV had 6 Likert-scale- questions, probing about customers' satisfaction toward Chloé products. Finally, Part V had 6 Likert-scale questions, asking about their intention purchase.

4.5 Data Collection: The data collection was conducted from April – June, 2018, by using convenience sampling.

4.6 Data Analysis : One-Way ANOVA was analyzed to test hypothesis 1 and hypothesis. Simple regression was analyze to analyze hypothesis 3 and Multiple regression was analyzed to test hypothesis 4.

5. Findings

5.1 Summary of Descriptive Findings

Majority of the sample were female (78%, n = 156), aged 28-32 years old (25.5%, n = 51), had occupation as employees (51.5%, n = 102), and completed bachelor's degree (82.5%, n = 165), and 80.001-110.000 Baht (34.5%, n = 69). Descriptive findings revealed that majority of the respondents were exposed to Chloé frequently per month (40%, n = 80). When examining the level of brand equity—high, medium, and low level, the descriptive findings found that respondents classifying into high perceived brand loyalty (Mean = 3.75, SD = .43), high perceived brand awareness (Mean = 3.67, SD = .46), perceived brand equity at medium level (Mean = 3.55, SD = .27), medium perceived quality (medium level, Mean = 3.54, SD = .46) and medium

brand association (Mean = 3.33), respectively. Respondents had high satisfaction toward Chloé products (Mean = 3.33, SD=.33). Finally, they had high intention to purchase Chloé's brand (\bar{X} = 3.93, SD= 0.25).

5.2 Summary of Inferential Findings

H1: Customers' exposure to advertisement of Chloé significantly influence with their perceived brand equity (brand awareness, brand association, quality, and brand loyalty).

As shown in Table 1, One-Way ANOVA analysis revealed that respondents' exposure to Chloé advertisement did not significantly influence their perceived brand equity, including brand awareness ($F_{(4, 200)} = 0.651, p > .05$), perceived quality ($F_{(4)} = 1.340, p > .05$), and brand loyalty ($F_{(4)} = 1.121, p > .05$) at the statistical significance of 0.05. However, their exposure to Chloé advertisement significantly influenced their brand association ($F_{(4)} = 2.224^*, p < .10$).

Table 1 One-Way ANOVA analysis the influence of media exposure to Chloé advertisement on perceived brand equity of Chloé

	Sum of Squares	df	Mean Square	F	Sig.
Brand Equity	0.243	4	0.061	0.791	.532
Brand Awareness	0.574	4	0.143	0.651	.627
Brand Association	2.492	4	0.623	2.224*	.068
Perceived Quality	1.151	4	0.288	1.340	.257
Brand Loyalty	0.862	4	0.216	1.121	.348

Note: $p^{**} < 0.05$, $p^* < 0.10$ (Sig.)

As shown in Table 2, that the LSD analysis revealed that how samples' exposure to advertisement influence their perceived brand association as follows: (1) the sample who never exposed to Chloé advertisement had significant different brand association from those who most frequently ($I-J = 0.57215^{**}, p < 0.05$), sometimes ($I-J = 0.48775^{**}, p < 0.05$), frequently ($I-J = 0.45417^{**}, p < 0.05$) and rarely Chloé advertisement ($I-J = 0.35000, p > 0.05$), respectively; (2) the sample who rarely exposed to Chloé advertisement had non-significant different brand association from those who have most frequently ($I-J = 0.22215, p > 0.05$), sometimes ($I-J = 0.13775, p > 0.05$), frequently ($I-J = 0.10417, p > 0.05$), and never been exposed to Chloé advertisement ($I-J = -0.35000, p > 0.05$); (3) the sample who sometimes exposed to Chloé brand advertisement had non-significant different brand association from who most frequently ($I-J = 0.08441, p > 0.05$), never ($I-J = -0.48775^{**}, p < 0.05$), frequently ($I-J = -0.03358, p > 0.05$), and rarely ($I-J = -0.13775, p > 0.05$).

H2 : Customers' exposure to advertisement of Chloé significantly influence their satisfaction toward the brand Chloé.

As shown in Table 2, One –Way ANOVA analysis revealed that the samples' exposure to Chloé advertisement did not significantly influence customers satisfaction ($F_{(4, 200)} = 1.645, p > 0.05$).

Table 2 : One-Way ANOVA analysis on the influence of the advertisement on customers' satisfaction on Chloé

	Model Summary				
	Sum of Squares	df	Mean Square	F	Sig.
Customers' satisfaction	0.749	4	0.187	1.645	.164

a. Independent variable: exposure to advertisement

b. Dependent variable: Customers' satisfaction Note: $p < 0.05^*(\text{Sig.})$

H3. Customers' perceived brand equity and customer satisfaction are significant predictors of their intention to purchase the brand Chloé.

As shown in Table 3, the result from Model Summary Table indicated that the customer satisfaction and brand equity were significant predictors of their intention to purchase ($R^2 = 0.043^{**}, p < .05$). The findings suggested that if both customer satisfaction and brand equity increases or decreases, they can significantly predict customers' intention to purchase at the rate of 4.3%. When examining each predictor, the Coefficient table showed that brand equity is a more powerful predictor ($\text{Beta} = 0.203, p < 0.05$) than customer satisfaction ($\text{Beta} = 0.028, p > 0.05$) to predict customers' intention to purchase. Coefficient model suggested that brand equity is accountable for 20.3 % of customers' intention to purchase, while customers' satisfaction is accountable for 2.8% of the customers' intention to purchase.

Table 3: Multiple Regression Analysis of brand equity and customer satisfaction

Coefficients^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.190	.286		11.137	.000	2.625	3.755
	Brand Equity	.187	.065	.203	2.891	.004	.059	.314
	Customer Satisfaction	.021	.053	.028	.394	.694	-.083	.125
a. Dependent Variable: Customers' Intention to Purchase								

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.559	2	.280	4.456	.013 ^b
	Residual	12.356	197	.063		
	Total	12.915	199			
a. Dependent Variable: Customer intention to purchase						
b. Predictors: (Constant), Customer Satisfaction Mean, Brand Equity Mean						

5. Discussion

(1) Hypothesis 1 results contradicted with past studies which found that print advertisement cannot influence consumers' brand equity, because the brand Chloé is the world brand and famous in all over the world, and for brand Chloé not only use print advertisement to promote the products but also use designers' concept to attract the consumers. Advertisements played an important role in today's competitive world by which organizations communicate with their customers, both current and potential. Companies allocate a considerable part of their sources to advertising (O'Quinn, Allen & Semenik 2009). The findings confirmed that the more advertisement of brand Chloé engagement trigger to a high brand equity and brand awareness. The brand use advertisement created a great impact on a brand's reputation.

Chloé suggested that the Chloé did not manage the advertisement effectively because although Thai customers have seen the advertisement frequently but the contents did not create brand awareness, brand loyalty,

and perceived quality. Exposure to the advertisement did not affect Thai customers recall the brand nor create a psychological preference and trust the brand over the other World brand. However, the findings revealed that exposure to advertisement significantly influence their brand association which refers to the deep seated in customer's mind about the brand. The advertisement enables the customer to associate with Chloé with something positive so that the customers relate your brand to being positive. Brand associations are the attributes of brand which come into consumers mind when the brand is talked about. It is related with the implicit and explicit meanings which a consumer relates/associates with a specific brand name. Brand association can also be defined as the degree to which a specific product/service is recognized within its product/service class/category. Using the AIDA model as suggested by Vakratsas & Ambler(1999 as cited in Priyanka (2013) contents advertisement resonates with the insights and experiences of Thai customers, link World Brand with high quality product, and with positive image deserved to be recognized in as leading fashionable products. Brand association portrayed by Chloé stimulates the desire of Thai customers to create their self-image and personality. Brand association made Thai customers create a sense of pride to purchase the product. The study suggested that exposure to advertisement enable Thai customers to develop pride and self- image, which is the reasons for purchasing the products as revealed by this study in the descriptive findings.

(2) Hypothesis 2 results revealed that the respondents' exposure to Chloé advertisement did not significantly influence customer satisfaction. Customer satisfaction refers to "a marketing term that measures how products or services supplied by a company meet a customer's expectation. It is important because it provides marketers and business owners with information that they can use to manage and improve their businesses"(Beard, 2014).

This study revealed that Thai customers' exposure to Chloé advertisement did not significantly influence customers' satisfaction. Researcher found that brand Chloé was not famous brand in Thai customers' mind. For Thai customers rank Gucci, Louis Vuitton, and Coach as the top of the mind among Thai customers and many Thais cannot recognize the brand for Chloé. However, Chloé positioned itself as the World's Brand and thus the company will not give few discounts for World's Brand, however, for Thai customers like promotion. Chloé did not use the promotional strategy that met the Thai customers' expectation. Thus, the exposure to advertisement did not affect the customers' satisfaction. This study coincided with the weakness of Chloé is the price strategy and latest collection. Chloé should use more promotional strategy to reduce the weakness of the company. The researcher found that SWOT were as follows: (1) the strengths of Chloé is their brand equity, financial resources and original Chloé line and new fragrance; (2) the weakness of Chloé is price strategy and latest collection reviews; (3) the opportunities of Chloé are new markets; (4) and the threats are economic turmoil, competitors' new collections, and counterfeit products.

There are two reasons why Chloé advertisement did not affect customers' satisfaction. Firstly, Chloé did not do advertisement on social media, billboard, TV, Youtube, transport advertisement which can reach with

Thai customers' life. Hence, Thai customers' awareness cannot be created, leading to low perceived quality and brand loyalty.

Secondly, Chloé used designers' concept to attract customers and different designers present different design. However, Chloé designers tend to tailor toward only female market (i.e. female's ready-to-wear and Haute Couture) only not male. Thus, all the advertisement did not tailor toward male product, leading to inequality in gender preference. This might be the reason why exposure to advertisement did not affect customers' satisfaction. Coinciding with the Social Exchange theory, the findings suggested that Thai customers perceived that the contents in the advertisement did not give importance to male customers, therefore, the male customers might feel that the company did not recognize their self-identity. Hence, the men sample was not very satisfied with Chloé advertising strategy, male customers want to be perceived significant and recognized too.

(3) Hypothesis 3 results suggested that consumers' ability to recall the name of a retailer have increased satisfaction levels, which can predict their customers' intention to purchase. Brand equity make the customer perceived the value of the product, by providing contents that has resonance with the customer experience. When consumer watched the print advertisement, it will them remind of the value of Chloé product, which will generate their intention to purchases. If the brand equity could resonance with customers' experience it will make customer form certain expectation toward the brand. However, if the advertisement could not resonate with their experience, it has low satisfaction because customer satisfaction was defined as "how products or services supplied by a company meet a customer's expectation. It is important because it provides marketers and business owners with information that they can use to manage and improve their businesses." Thus, brand equity will not be created effectively if the advertisement was not tailored toward the customers' value and experiences. The findings suggested the print advertisement still not tailored toward the values and expectation of the Thai customers. Thus, the company should put more efforts in the consumer insight in the psychology of Thai customer, produced an advertisement that has resonance with Thai insights.

6. Suggestions

6.1 Suggestion for Further Application

1. This kind of research can be implemented in other social media not only force on advertisement such like Facebook, Instagram and Snapchat rather than advertisement. The more social media platform means more diversity channel and more accurate result will receive.

2. Future research should examine other social media such as Line, Snapchat or other social platform and compare with social media platform can influence brand equity and customer satisfaction, customers' intention to purchase the most. Future research might examine how cultural values might influence the subjective norm and perceived behavioral control and behavioral intention to purchase.

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**JAPANESE COMMERCIAL CODE: THE COMPATIBILITY WITH 1980
VIENNA SALES CONVENTION AS COMPARED
WITH THAI CIVIL AND COMMERCIAL CODE**

Jumpita Ruangvichathorn

Faculty of Law, Sripatum University

E-mail: tidtang2004@yahoo.com

ABSTRACT

Given the fact that, currently in Thailand, there are no specific laws governing commercial sales and international sales which apparently causes legal obstacles. As Thailand and Japan share similar legal histories and backgrounds and both now follow the legal system of the Continental Europe, i.e. the Civil Law whereby many countries joining therein separate commercial sales from non-commercial sales, including Japan. In addition, Japan, but not Thailand, is a member state of the United Nations Convention on Contracts for the International Sale of goods (CISG), or the 1980 Vienna Sales Convention which was designed to apply only to commercial sales and is now worldwide accepted and gaining more and more popularity as the growing number of contracting states has been increasing and currently reaching 89 states.

This research is thus aimed to study the compatibility of Japanese Commercial Code regarding sales with the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention as they were both designed to apply only to commercial sales and then compare with Thai Civil and Commercial Code regarding sales. The sales provisions provided in Thai Civil and Commercial Code are the only set of Thai sales law and apply to both commercial sales and non-commercial sales which are distinct in natures.

It is highly expected that the result of this research will be a piece of vital information which can be used to develop Thai sales law by considering (1) the separation of domestic commercial sales provisions from non-commercial sales by any means, and (2) the accession to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying to international sales which needs specific provisions designed for international sales.

KEYWORDS: Japanese Commercial Code, Commercial sales

1. Research Rational and Background

The history and background of Japan and Thailand's legal systems bear similarity since the development of their ancient laws to modernized laws under the influence of the West during its colonization at the beginning of the 19th Century. Back then, both countries decided to follow the continental Europe's legal system, particularly France and Germany, by enacting their own codes resulting which Japan and Thailand have long been classified as countries utilizing the Civil Law¹ legal system as distinct from the Common Law² legal system which is widely used in England and commonwealth countries.

At present, there is no existing Thai law specifically applied to commercial sales including international sales which bear similar natures. The natures of sale provisions under Thai Civil and Commercial Code are domestically and does not specifically conform to commercial sales including international sales. In term of international sales, similar nature exists all over the world and thus emerged a number of initiations to harmonize sales law to be as one or to share the same principles. The International Institute for the Unification of Private Law, or UNIDROIT, established by the Italian government and the United Nations Commission on International Trade Law, or UNCITRAL, established by the United Nations are two major organizations which involved in these initiations by launching the Uniform Law on the International Sale of Goods (ULIS), the Uniform Law on the Formation of Contracts for the International Sale of Goods (ULFIS) and the United Nations Convention on Contracts for the International Sale of Goods (CISG) or, the 1980 Vienna Sales Convention respectively.³ The first two ULIS and ULFIS were the products of UNIDROIT in 1960 but unfortunately were not successful as the number of contracting states was few due to some specific reasons which shall not be discussed here. Followed by UNCITRAL, the United Nations Convention on Contracts for the International Sale of Goods (CISG) or, the 1980 Vienna Sales Convention was adopted in 1980 at a Diplomatic Conference held in Vienna, Austria and effective in 1988 after the number of ratifying states reached ten states. Unlike the Uniform Law on the International Sale of Goods (ULIS) and the Uniform Law on the Formation of Contracts for the International Sale of Goods (ULFIS), the United Nations Convention on Contracts for the International Sale of Goods (CISG) or, the 1980 Vienna Sales Convention has been much more successful as the number of contracting states has now reaching 89 states as of 2017 including Japan and more recently is Vietnam⁴ which is the second country in the Association of Southeast Asian Countries (ASEAN) following Singapore.⁵

¹ Or, known as 'Codification System', originated from Roman Laws and widely used in Continental Europe and countries all around the world including Asia.

² Or, known as 'Non-Codification System', originated from customary laws or Judge-made laws.

³ Ruangvichathorn, J. (2003). "International Convention, is it about time?" In *Thammasat Law Journal*, pp.1-3.

⁴ Effective on 1 January 2017.

⁵ Ruangvichathorn, J. "International Trade Law and Sales Convention" In Lecture Handouts, the Council of State, 2018.

Japan is currently a contracting state of the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention⁶ but not Thailand. Given the fact that both the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention and Japanese Commercial Code were specifically designed to apply only to commercial sales⁷ which are distinct in nature from non-commercial sales⁸, the study why Japan decided to adopt the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention by analyzing their compatibilities is the aim of this research. On the other hand, the study why Thailand has not yet acceded to the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention despite the fact that Thai Civil and Commercial Code is not compatible with commercial sales including international sales because it was designed to apply to both commercial sales and non-commercial sales which are distinct in nature and currently causes legal obstacle in Thailand⁹ is also the aim of this research. Accordingly, as Thailand needs other sets of law applying to domestic commercial sales and international sales separately from current Civil and Commercial Code¹⁰, this research shall also be beneficial for Thailand if it will ever be used as part of the consideration to develop Thai sales law by (1) separating domestic commercial sales from non-commercial sales, and (2) acceding to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying specifically to international sales.

In addition, Thailand and Japan share similar legal histories and backgrounds bearing the fact that, at the time of drafting its own codes including the Civil and Commercial Code, Thailand partly utilized Japanese Civil Code as model¹¹. Any comparative study of Japanese Commercial Code and Thai Civil and Commercial Code derived herein shall also be valuable in term of legal history and legal principle particularly in international trade and investment to legal communities as a whole.

⁶ Effective on 1 August 2009.

⁷ Ferrari, F. and Torsello, M. (2014). *“International Sales Law – CISG in a Nutshell”*. West Academic Publishing. p. 104. (stating that ‘CISG excludes the sale of goods bought for personnel, family or household use from its sphere of application which ‘leads *de facto* to a limitation of the CISG’s sphere of application to commercial contracts’.)

⁸ See Chapter 2

⁹ See Chapter 2

¹⁰ See Chapter 2

¹¹ Ruangvichathorn, J. (2015). “The Japanese Civil Code: The forerunner of Thai Civil and Commercial Code”. *Sripatum University Press*, pp.18-19.

2. Research Objectives

1. To study the compatibility of Japanese Commercial Code regarding sales with the United Nations Convention on Contracts for the International Sale of goods (CISG), or the 1980 Vienna Sales Convention as compared with Thai Civil and Commercial Code in the same aspects.
2. To study the incompatibility of Thai Civil and Commercial Code regarding sales with domestic commercial sales and international sales.
3. To study the significance of Thailand in developing Thai sales law by (1) separating domestic commercial sales from non-commercial sales by any mean, and (2) acceding to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying specifically to international sales.

3. Research Questions

1. To what extent Japanese Commercial Code regarding sales is compatible with the United Nations Convention on Contracts for the International Sale of goods (CISG), or the 1980 Vienna Sales Convention as compared with Thai Civil and Commercial Code in the same aspects.
2. To what extent Thai Civil and Commercial Code regarding sales is not compatible with domestic commercial sales and international sales.
3. To what extent Thailand will benefit from (1) the separation of domestic commercial sales from non-commercial sales by any means, and (2) the acceding to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying to international sales.

4. Research Hypotheses

1. Japanese Commercial Code regarding sales is compatible with the United Nations Convention on Contracts for the International Sale of goods (CISG), or the 1980 Vienna Sales Convention because they were similarly designed to apply only to commercial sales, not non-commercial sales.
2. Thai Civil and Commercial Code regarding sales is not compatible with both domestic commercial sales and international sales which focus on commercial matters because it was designed to apply to both commercial sales and non-commercial sales which are distinct in nature and thus currently causes legal obstacle in Thailand.
3. It shall be beneficial for Thailand to develop Thai sales law by (1) separating domestic commercial sales from non-commercial sales by any means, and (2) acceding to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying specifically to international sales.

5. Research Scope

1. Studying on selected sale provisions of Japanese Commercial Code and analyze their compatibility with the United Nations Convention on Contracts for the International Sale of goods (CISG), or the 1980 Vienna Sales Convention.

2. Studying on the same selected sale provisions under Thai Civil and Commercial Code and analyze their incompatibility with domestic commercial sales and international sales.

3. Studying on the significance of Thailand to develop Thai sales law by (1) separating domestic commercial sales from non-commercial sales by any means, and (2) acceding to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying specifically to international sales.

6. Research Significance

1. Learning the compatibility of Japanese Commercial Code regarding sales with the United Nations Convention on Contracts for the International Sale of goods (CISG), or the 1980 Vienna Sales Convention as compared with Thai Civil and Commercial Code in the same aspects.

2. Learning the incompatibility of Thai Civil and Commercial Code regarding sales with domestic commercial sales and international sales.

3. Proposing the significance of Thailand in developing Thai sales law by (1) separating domestic commercial sales from non-commercial sales by any means, and (2) acceding to the United Nations Convention on Contracts for the International Sale of Goods (CISG), or the 1980 Vienna Sales Convention with the enactment of a new Thai sales law applying specifically to international sales.

7. Conclusion

In sum, with respect to JCOMC, CISG and TCC, on the hand, JCOMC regarding sales is undoubtedly compatible with CISG both in substances and practices which are based on commercial sales, not non-commercial sales, resulting which the adoption of CISG by Japan was not too remote. On the other hand, even though TCC, in the case of Thailand, is found herein to be incompatible with domestic commercial sales and international sales, the adoption of CISG is also not too remote to be considered by Thai authorities. This is not only because the insufficiency of laws applying to those 3 types of sales, i.e. civil or non-commercial, commercial and international, but also their incompatibilities to accommodate those three different types of sales which are primarily distinct in natures. In addition, in the course of this research, the writer has also found out that JCC, which has also to come into play under Article 1 (2) of JCOMC (but is beyond the scope of this work) and has been in existence for a more than 100 years (the first new text code was used in 1898) similarly to TCC (the first code was used in 1966), has now been revised and awaited for its effectiveness shortly. Based on this reason

alone, Thailand should thus considered revising TCC and also taking this opportunity to revise its sales law accordingly.

8. Discussion

Throughout the course of this research, the writer has found out a great deal of valuable legal materials which eventually suggest that the existing Thai laws regarding sales in which we have been relying on them all along are not sufficient and compatible with the accommodation of all types of sales currently practiced in Thailand. This research, with great expectation, will be potentially used to consider the development of Thai sales in the future or, at least, trigger the same.

9. Recommendation

The recommendation of this research is the development of Thai sales law by considering (1) the separation of domestic commercial sales from non-commercial sales by any means, and (2) the acceding to CISG with the enactment of a new Thai sales law applying specifically to international sales.

10. Acknowledgements

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As Thailand and Japan are close in term of legal background and relationship, the writer is thus still interested in doing more research on Japanese laws but this time blending with CISG which is currently worldwide accepted and Japan is now its member states (not Thailand). With respect thereto, the writer is eager to learn more of merits and demerits if Thailand will consider becoming CISG's member states, at least, in term of developing its own sales law which has been seriously called for since 1994 (the content of which is presented hereof). The writer, consequently, has been re-appointed as the same visiting scholar by Faculty of Law, Hokkaido University, Japan and under the same kind recommendation and hospitality of Professor Hiroo Sono to conduct and accomplish this Research. My sincere and special thanks thus are extending to Faculty of Law, Hokkaido University, Japan and Professor Hiroo Sono.

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Rethinking the Study of the Language Reform in South Korea under the U.S. Occupation (1945-1948): The Present Condition and the Prospects for the Orality Approach

Ken'ichiro HIGUCHI

School of Culture-Information Studies

Sugiyama Jogakuen University

higuchi@sugiyama-u.ac.jp

ABSTRACT

This paper discusses the importance of the “orality approach” to the research on language reform in South Korea under U. S. occupation from 1945–1948. Orality is a concept contrasted with literacy. The former places an emphasis on the voice, speech sounds, and the spoken language, whereas the latter is concerned with the text of the written language. Therefore, orality is greatly related to transitoriness, instancy, and sensitivity, while literacy is related to accurate descriptions or recordings and its communication and tradition. It cannot be denied that the language reform under the US occupation was planned and carried out by those with the ability of “writing.” Today in the academic field, official document-based research is in full swing; however, we are reaching the point where we should reconsider the significance of the speech and/or the private documents, or orality, and stand against the “academic archival hegemony.” It is believed that this applies to research on the language reform during the US occupation.

KEYWORDS: South Korea, language reform, orality

1. Introduction

This paper discusses the importance of the “orality approach” (as well as the “literacy approach”) to the research on language reform in South Korea under U. S. occupation from 1945–1948.

Orality is a concept contrasted with literacy. The former regards the voice, speech sounds, and the spoken language, whereas the latter regards the text of the written language. Therefore, orality is greatly related to the transitoriness, instancy, and sensitivity, while literacy is related to accurate descriptions or recordings and its communication and tradition.

In 1982, Ong relativized literacy and orality, and reexamined the cultural relationships between written text and spoken language. Ong indicated that in administrative procedures in eleventh- and twelfth-century England, oral testimony was initially considered more trustworthy than text because oral accounts could be questioned and allowed for concerned individuals to make a counterargument, which could not be done with text. The technology to record language shifted the main cultural method from oral communication to recording on physical materials, and a conversion from “human memory” to “records” was brought about.

On behind Ong relativizes literacy and orality, there is a thought that the consideration for the modernization and importance of the sphere of orality. This consideration should not be neglected regarding language reform in South Korea. The language reform included the improvement of the literacy rate, and parallelism between the spoken and written language at the time of Japan's Meiji Restoration was a linguistic modernization and a challenge to make literacy a nationally based cultural tradition. And the situation was similar in South Korea in the modern age, especially in terms of building the foundation for language policies in the Republic of Korea after Japanese rule in the Korean Peninsula ended. A focus on language reform during the period of U.S. occupation, from 1945–1948, is needed.

2. The Present Condition and Issues of the Study

South Korea's experience of U.S. occupation was a concurrent process of decolonization (the end of Japanese rule) and de-occupation (the withdrawal of the U.S. military as the occupying force). This political and social situation in South Korea was a great influence on the way the society would become the Republic of Korea later on. The language reform at that time also became the starting point for the formation of today's “language of the Republic of Korea,” but there is often only a focus on “written language” or “written things.” Based on the orthodox typology of language planning by Cooper in 1989, the particular issues of language reform were ①status planning: establishment of Korean as the “national language”; ②corpus planning: standardization of the Korean language; and ③education planning: the promotion of “national language” education. From the time of these reforms until recently, there has also been a tendency of thought that the government can and should control the people's language through planning and implementation of policies. Therefore, there seemed to be a way of thinking that “written things,” such as laws and textbooks and their “writing,” should be superior to “speech” and “things not written.” In particular, immediately after the end of Japanese rule on the Korean Peninsula, in the process of transforming the Japanese-dominant situation and establishing Korean as the “national language” in both name and functionality, the U.S. government, the elite class of Korean linguists and educational scholars played leading roles, resulting in the language policies afterward also having shown an elitist nature.

Furthermore, from the time of the U.S. occupation to the present, words that are outside of the “national language” and “standard language” (e.g., standing dialects, colloquialisms, other spoken languages, etc.) have had relatively little public perception in Korean society. In Japan, the National Language Council of Japan (after the abolition, the Cultural Council’s Subcommittee for National Language has succeeded in an actual sense) and the National Institute of Japanese Language are not intended to strictly define and manage the “national language,” and from the social perspective, there is relatively high interest in and acceptance of new words, buzzwords, and “dead words” (words that young people feel are outdated). In South Korea, however, tangible and intangible public institutions such as the National Institute of Korean Language and the Basic Act of the Korean Language have been established, and there are various systems that regulate “Korean language” legally, administratively, and exclusively, such as the National Institute of Korean Language’s system of issuing the *Refined Korean Language Collection Book*. In South Korea, “written things” and “writing” have been emphasized in policies and academic interests, reflecting the linguistic views of people from the social mainstream. On the other hand, there are still many issues that need analysis, such as the functional, daily usage of “old-rules languages” like Japanese and English, or the analysis of linguistic views on dialects and the spoken words.

Previous research on the language reform in South Korea during the U.S. occupation is relatively abundant. Even in Japan, in addition to Higuchi (2009) and mainly in the field of educational history, there have been studies by Abe, Park, and others. However, most studies in this field focus on “writing” and “letter culture” (i.e., aspects of literacy). The research of Abe (2004) and Park (2013) were evidently based on “written historical materials.”

By contrast, it is no exaggeration to say that research focusing on orality in South Korea during the U.S. occupation is sparse. As a result, the National Institute of Korean Language continues to publish the *Refined Korean Language Collection Book* (mentioned above), which is likely because the refinement of the Korean language has not yet been completed and possibly NOT because the movement is “correct.” Yamada (2005) stated that languages are not always controllable by laws, policies, and exercises, and there is no guarantee that those who actually use language will comply with such laws and policies either in encouraging or prohibiting the use of the language. It can be said that the greatest difficulty of the language reform of South Korea during the U.S. occupation was exactly this point, which is why the discussion that took place at that time is still repeated today. Therefore, apart from the plans and linguistic views of administrators and linguists, it is important to recognize how persuasively words are used by people and the reality of their diversity and complexity.

The primary content of the language reform during the U.S. occupation included the use of Hangul only, refinement of the Korean language, promotion of the national (Korean) language, and the creation of new words. The previous situation, wherein the Japanese language was superior, came

to an end, and members of the Korean Language Association (today's Hangul Association) promoted the compilation of language textbooks, teacher trainings, the use of Hangul, and diffusion of the Hangul orthography in corporation and partnership with the U.S. government. From then on, literacy has been regarded as important in this field.

In terms of methodology, excavation and analysis (though sometimes "swallowing" the written contents) of the resources possessed by the U.S. National Archives & Records Administration (NARA) are often emphasized in this kind of study; however, it is critical to sufficiently consider excessive reliance on such official government documents because, although they are certainly "objective and highly reliable as they are fundamentally the record of the government," "in the private documents, individual subjectivity and paramnesia inevitably exist" (Hosoya 2017). The idea of "archival hegemony" is often discussed today. Kawashima (2009), who has advocated this idea, explains it as follows:

"If national or administrative documents are well controlled and we disclose them to citizens and historical researchers, it might lead to confirmation of the historical facts and historical study, and then we can put the nation's intention and action into the writing of history. Countries, such as the United States and the United Kingdom, disclose a lot of historical documents regarding the politics in and out of the country, and it reflects in the eyes of the US and UK government in the historical explanation. On the contrary, the countries and governments that do not manage and disclose the documents will have a hard time putting their intention and action in the history."

Namely, each country "classifies and discloses the documents to researchers, and it influences the writing of history" (Kawashima 2009). Hence, if documents of a specific government are open and accessible, that country will have international influence in terms of the writing of history.

However, this is an attitude wherein (only) documents are regarded as "evidence." It might be true that "archival hegemony," which is established by combining the "management and disclosure" as well as the "reliability" of public documents, can affect diplomacy and arguments on historical recognition. In addition, the strategy of each nation is to have an advantage over other nations. However, is closing in on history, wherein we connect private documents merely with "subjective views and memory lapses" while revealing a reliance on public documents, which are "government records," a sincere approach? The idea of "archival hegemony" is certainly an interesting political phenomenon, but "what has been written" might have simply existed alongside "what has not been written." Therefore, researchers should bear in mind that "archival hegemony in the academic world" might have been produced. It is meaningful to emphasize the meaning of "reading between the lines"

here, which includes understanding the importance of the words by relativizing the voice of those who have yet to be recorded (orality) with literacy.

3. The Language Reform of South Korea under the U.S. Occupation and the Orality Approach

3-1. Difficulties in the Language Reform

While research on the language reform during the U.S. occupation has been developed based on historical materials and records, and its value and results should be well-appreciated, it is also necessary to relativize such a literacy approach and to rethink the significance of research using an orality approach. For example, “Recovery of the Korean Language” (우리말 도로찾기; a replacement list/guideline for using “proper” Korean language) was one of the difficulties of language reform during the U.S. occupation. Chung (2003) calls this “Recovery of the Korean Language” “a kind of spiritualism” and points out that “there would be rare people who could control their own language action, according to the replacement list.” In addition, he mentions that “the time when Japanese or English vocabulary unintentionally got mixed in had continued for a while” and quotes the following examples raised by Lee Huiseung (이희승 1947) (Foreign words underlined) :

“마쓰모토상요, 나 지금 막 오는 길이야.”

(Hey Mr. Matsumoto, I have just arrived.)

“아이쓰 빠가란 말야. 왜 그렇게 기가 기까나이한지 모르겠어.”

(He is stupid. I don't understand why he cannot be thoughtful that much.)

“여보, 오늘 샷라리 탕소? 그럼 한장 내 응. 캐바레 상하이로 여섯시쯤 응?”

(Hey, you got a salary today? Then you buy me a drink. Around 6 at the Cabarete Shanghai. OK?)

“안생세이 레끼시 시간에 그저 오도기 바나시만 한단다야.”

(They say Teacher An always tells fantasy stories during the history class.)

In the movement of the refinement of the Korean language after the liberation of the Korean Peninsula, the borrowed words of Japanese-origin were especially targeted for elimination as they were seen as “Japanese residue” and the substitute alternative words were promoted.

And Lee himself referred to such “impurity” as “the extreme chaotic state.”, and raised as causes thereof, influence of Japanese education (before liberation), confusion of thought (“freedom is not to act selfishly”, and unawareness (“a strong autonomy cannot be expected as long as they are short of the spirit of protection of the national language”). However, looking from a different angle, it

should be considered that the orality existed in the lively linguistic life of the ordinary people at that time, aside from the language reform in the sphere of literacy.

3.2. Kim Kirim's Criticism of "Purism"

As to this situation, we will look at the discussion by Kim Kirim (1908-1950?) next. Kim is well-known as a poet rather than a critic, but he advocated a theory that criticized the series of language reforms in South Korea under the U.S. occupation. Until today, Kim's argument has not been much discussed; however, it is important when we think about the situation of orality at that time.

Kim pointed out in his article of 1949, concerning "the new words" (새말) after liberation, that "some purist Urimal [our language] scholars have brought a lot of new words, from the direction where they dislike Chinese words and fake-Chinese words which came from Japan" and criticized that "they brought those words to the elementary school textbooks imperceptibly, without any national consent, during three years of the U.S. occupation."

The "purism" mentioned here was defined as "to go beyond the extent of replacing the difficult Sino-Korean words with traditional easy words, or untangling such difficult words, and to create more arcane words that are even more difficult than those Sino-Korean words and promote the use of such words forcefully." That is to say, Kim criticized the fact that avoiding the Sino-Korean words as foreign matters and persisting in creating "the pure Korean language" introduced words whose meanings were even more difficult to understand.

However, it should also be noted that Kim indicated that he agreed with the movement of the "Recovery of the Korean Language" by the "Korean linguists" after the liberation. He wrote in the same article, "It is good to get Urimal back. It cannot be bad. However, despite such good motivation, there are the mistakes made by this series of people that hold an idea even to be called 'purism,' where they have forgotten two propositions that will be the base of language recognition: firstly, a language is mobile, as it is alive; and secondly, a language is not one that will be made by some clever men spontaneously, but is a social and historical fact that will grow with the participation and investment of the entirety of the ethnicity."

Kim agrees with the motivation for the "Recovery of the Korean Language" movement, but he strongly criticized the "purism" as its reality was "falling into 'archaism,' that is, old-fashioned ancient tastes ignoring the reality on one hand, then on the other hand, showing the self-righteousness that ignores the objectivity of the words belonging to the cooperative society, and becoming a pedantry that cannot form a foundation in real life." He then put forward the idea to counter the purism movement by asserting or emphasizing the role of the public or the common people in creating a language. He says in the same article: "If the new words created by the purist are merely 'Don Quixote,' who would create the new words? It is the public. [...] The commoners are in fact more

genius for making new words than mediocre purists. [...] They also never go overboard creating new words. They are absolute pragmatists.”

4. Conclusion

It cannot be denied that the language reform under the U.S. occupation was planned and carried out by those with the ability of “writing.” For example, Korean “standard language” was originally announced by the Korean Language Association in 1936, based on the “Collection of Screened Korean Standard Language.” In his book written in 1932, Lee Huiseung, who was a committee member of the standard language screening, offered the conditions of the standard language: it must be the standard language by geography (center location of politics, transportation and culture), standard by age (modern days) and standard by class (those who are educated and in the middle class). However, Kim Kirim’s discussion placed the focus on those outside such standards and on their power of creating the words of those who do not have the “ability/things to write.”

Today in the academic field, official document-based research is in full swing; however, we are reaching the point when we should reconsider the significance of the speech and/or the private documents, or orality, and stand against the “academic archival hegemony”, when we think importantly of the reality of “living” language and how it becomes or changes if planned and/or “policied”. It is believed that this applies to research on the language reform during the U.S. occupation.

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The Perks of Studying in Thailand and Overseas

Kim Maurera Amigable

School of Liberal Arts, Sripatum University

E-mail: amigable.ma@spu.ac.th

Sutthicha Phetwira

E-mail: sutthicha.ph@spu.ac.th

School of Liberal Arts, Sripatum University

Nattakan Diewtrakul

School of Liberal Arts, Sripatum University

E-mail: nattakan.di@spu.ac.th

ABSTRACT

Are you confused and having a problem in deciding about studying abroad or studying in Thailand? Which do you think is best for you? This article provides the readers with information and knowledge about the kind of life international students lead while studying abroad. It will be useful for those who are considering or planning to study overseas. The article will help Thai students to make informed choices regarding the country they intend to study and the program they want to pursue. The topics to be covered in this paper include the following:

- (1) Important things needed to be prepared prior to leaving the country for education overseas
- (2) Studying in Thailand and its universities.

In line with this, parents and students will be able to have an idea about studying abroad and studying at a local university and some guidelines. It will also give international students an idea about what would be like if they choose to study in Thailand. There are certain factors that need to be seriously taken into consideration such as the costs of living, university standards, fees and others.

KEYWORDS: International students, abroad, cost of living, lifestyle, financial support, open university, international university.

Introduction

Choosing an educational program and a country in which to study is one of the most difficult decisions for those students who wish to study abroad. They have to carefully take into account several factors

such as cultural differences, expenses and budgets, foods, lifestyles, and other important things. You need to deal with lots of situations such as culture, expenses, lifestyle and other important things. Being an international student would be a great opportunity for individual students to expand their world view and enhance their experience of the world, thus making them well-prepared to live and work with people of different cultures. Today, the number of students studying abroad is on the rise, but most of them still have difficulty in choosing the country to study because of it seems that most of them are having difficulties on choosing the best country to study due to several factors, like the cost of living and tuition fees, language barrier, and cultural differences.

Studying in Thailand as a Thai student is much easier compare in studying overseas. Lower tuition fee costs, no language barrier, lower costs of living and no cultural conflicts. You can choose top universities or even international schools that who wish to study. But the competition in terms of job and career after schooling will be high since studying in your own country will be just a normal. It will only differ on the standards and its rank to other schools or universities.

Being an international student is great experience to improve yourself and also a great advantage to find a job, but it's costly while studying in Thailand is cheaper, has good quality education but will have a very high competitions in terms of finding jobs. Would you choose to have a great experience or stick to quality education?

Objectives

The objectives of this study are to:

- (1) Identify important things students need to be prepared before going abroad.
- (2) Give knowledge and guidance about studying in Thailand and its universities to both Thai and foreign students.

This article will help and guide the students before having a decision since studying overseas will be a great advantage for the future employment but it's expensive while studying in Thailand with the same quality of education will not be that costly at all. Also, the following are some information about what it's like to study in Bangkok, including degree programs available, career opportunities, student life, cost of living, and more.

Topic (1)

Here are few tips from the students who once studied overseas.

Based on the Lauren Kubik a former international student, few things you must know before studying abroad [1].

Get all of your important documents together

- **Passport.** Make sure that you already have your passport and it still has a long time of validity. If not, you must apply as soon as possible to avoid delays.
- **School documents.** Documents such as transcript of records, diplomas, resume, acceptance and recommendation letter is really important for your files. It is also advisable to save a soft or electronic copy from your flash drives. Saving your documents online, such as email, will be better so that you can easily access it through internet whenever you needed it.
- **Health Insurance.** Make sure to have a health insurance.

Set doctor appointments and check on health insurance

- Secure a health insurance and health check-up before going abroad. It might give you a big trouble if you will be sick in other countries.
- Double check if the school or host family can provide you some health insurance so that you would know if you need to have it by your own.

Plan out what you will pack

- It's easy to find the basic necessities if you are already abroad, just bring those important things and clothes which you can use depending on the weather. Make sure to check the types of climate a certain country has. Avoid bringing unnecessary things like big towel, big blanket, blower, fan, big umbrella, etc.

Speak with your bank

- Make sure you have an idea about the banking charges and inform your bank that you will study abroad. Give authorization to your parents that they can access your bank account if there is some problem.
- Let your parents know about your bank account number, and how much money you bring so that they can also monitor your expenses if you still have budget or you already overspending.

Plan your finances

- If you have enough money for travelling, it would be fun. But avoid spending a lot and know your priorities because living abroad with zero bank account is difficult and risky.
- Avoid going to night clubs or drinking with new friends as much as possible. It might give you a financial problem.

Brush up on your language skills

- This is your chance to learn another language. Make sure you bring your dictionary and translator so that you can communicate with them. Learning other languages is a good habit because it can give you more knowledge and easier to communicate with them while exploring your life from their country. Read up on your new city and cultural norms

- If you are staying abroad and the place is new to you, make sure that you research and you have enough knowledge about their cultures and beliefs. You need to follow those Do's and Don'ts of a certain country to avoid conflicts.

Be flexible—you cannot make a multi-year plan

- While studying abroad, just relax and have fun. You do not need to finish everything according to your plan. A lot of plan changes might happen while staying abroad. So be flexible and go with the flow.

According to Andrea Gaez, “One of the first things I did was join as many clubs as possible. I thought it would be a good way to get to know people and to be exposed to new experiences. As I started going to class, sorority and other social events, I started realizing that I had as many questions about my new classmates as they had about me. Here's a small summary of the struggles, the joys and everything in between:” [2]

Time zones

- It always affects your body sleeping time because of the time zone. Staying away from family and friends is not that easy. Just to avoid homesickness, some mobile phone applications such as Whatsapp, Skype, Viber, Line and Facebook is really useful in communicating with your love ones.

FREEDOM

- There's no curfew (for some students). No grounding. You can stay up as late as you want - which you probably are doing because of all the homework and studying you need to do. You can also come and go as you like, with no one reminding you that this is a household, not a hotel.

A top tips by Clair Adams [3]. There are a few essentials to keep in mind – from ensuring that you have the right visa to striking a good balance between your studies and your social life.

Simplified paperwork procedures

- Once your request is accepted and approved by the university, you must prepare yourself to apply for a student visa. It's good news for those who wish to apply for an ED visa because the Australian government just simplified everything. Please don't forget to reach out to your university and ask some help when applying.

Financing support options

- Considering that Australia has high living standards, you must prepare your budget accordingly and try to find part-time jobs just to support your needs. Not to mention other expenses such as housing, food and healthcare, all of which can be surprisingly high.

Studying dilemmas

- Coming from a different culture can be a challenge when you travel across the world to earn your degree. You need to adjust the way of learning, student culture of a certain university because

education system might be narrower, broader or has different mix of practical and theoretical classes.

This can be difficult for a student to keep up.

Public transport

- No matter where you decide to study, each country has its own public and mode of transportation. Just make sure you will figure out everything especially the time table of each route.

Get used to new grades

- Prepare for some changes in terms of marking in your new university. They use letters to grade your work, but their success percentages and meaning are quite different.

Work and study options

- Many student visas allow their students a certain period of time to work in Australia, and although this is often an excellent way to minimize your expenses, you should consider whether this will affect your studying.

There are a lot of factors to consider if you really want to go and study abroad. It is not that easy as what you are thinking now and you need to ask yourself if you can really do it or not. However, staying outside from your comfort zone is always the best option for you to have a better life.

Topic (2)

Studying in Thailand is more relax and not so complicated. For Thai students, it will be a great advantage to improve their knowledge and enjoy the good quality education of the top universities, it is a great platform to build camaraderie and experience. For International students who wished to study in Thailand might be having a problem in terms of language barrier and cultural differences. But learning different language and adapting different culture will be a great experienced to develop your personality.

Education System

The standard duration of study for programs is usually four years except for architecture, art, graphic art and pharmacy that require five years of study while training in medicine, dentistry and veterinary medicine lasts six years. Each year has 2 semesters, June to October and November to March, and a summer session from April to May. However, some universities have adopted the school calendar systems like the ones from U.S. or Europe.

If you are planning to study courses such as business administration, marketing, business English, Thai language, general management and international business management are the top choice of international students. Examination such as TOEFL or IELTS test may be required by some universities to evaluate the English proficiency of a student. For Thai programs, the Test of Thai as a Foreign Language is the official certificate accepted by Thailand Ministry of Education.

Application requirements for international students

If you wish to study in Thailand, just follow and application procedure as follows:

1. Follow simple application procedures, either applying online or by e-mail to the chosen university.
2. All accepted applicants receive a Letter of Admission from the university.
3. Send all the documents required such as:
 - Completed Application Form
 - Copy of Passport
 - Transcripts: High School / Previous or current educational institution Official Transcripts (copies must be in English and be original or officially certified copies of originals)
 - Two Letters of Recommendation
 - Chosen language of instruction with the language proficiency test annexed
4. For most universities, a student must send an essay between 300 to 500 words on a topic of your choice. But it is advisable to always check with your prospective university for the exact required type of documents.

An international student who wishes to study and stay long in the Thailand is required to have a valid visa which is the Education Visa (Non-Immigrant ED visa). However, the school that the student is planning to attend can help with the paperwork. It can be obtained from the Thai embassy or consulate in their home country. The Education Visa is good for 90 days only which can be extended for additional one-year period as needed at the Bureau of Immigration in Thailand. The visa fee for extension is THB 1,900 (about 60 USD) and after receiving the visa, students must notify the Immigration Office every 90 days with their current address; failure to do this notification will be fined THB 2,000. Students are also required to prove that they have adequate finances for residing in Thailand during their studies. A student alone must show that they have THB 20,000 and students with families must have THB 40,000.

Thai language is an official language of instruction in Thai universities. However, some schools are also offering degree programs taught in English and higher education institutions continue to increase the number of courses. Some universities offer candidates the option to follow courses for Thai speaking students

in English. In line with this, improve your academic English language skills in order to meet requirements since Thai universities are offering a degree for international students. Choose an English language school anywhere in the world and pick your preferred English exam preparation course from diverse language course options.

Based on the article of Vanessa Chikezie about “Study in Thailand: Lists of Universities, Costs and Living Expenses” [6], Thailand is formerly known as Siam; a unitary state at the center of the Southeast Asia. Bangkok is the capital and the largest city and the country is bordered to the north by Myanmar and Laos, to the east by Laos and Cambodia, to the south by the Gulf of Thailand and Malaysia, and to the west by the Andaman Sea and the southern extremity of Myanmar.

Thailand is also considered as one of the countries in Asia where you get quality education. There are approximately 400 master’s degree programs in the country that are taught in English. Many higher education institutions in Thailand are highly regarded, especially in the areas of environmental studies, agriculture, energy, law and Buddhist studies. Thailand education is affordable as compared to those in the US, Canada, the UK.

According to **QS Top Universities**, a famous website where they rank the Universities all over the world. These are the top Universities for 2019 in Thailand wherein Chulalongkorn University rank number 271, a government run university dominates the Thai University.

Rank	Name of the University
271	Chulalongkorn University
380	Mahidol University
601 – 650	Thammasat University
651 -700	Chiang Mai University
801 – 1000	Kasetsart University
801 – 1000	Khon Kaen University
801 – 1000	King Mongkut’s University of Technology Thonburi
801 – 1000	Prince of Songkla Universtiy

Here are some tips from TRAVOR AKWENYE’S ARTICLE [7]: Study Abroad in Thailand: Universities, Programs, Visas, and Costs Choosing a university can be one of the hardest decisions that you’ll ever have to make, especially since this is directly tied to your life and career goals. Oblivious to this fact, I found myself studying in the de facto state of Northern Cyprus a few years ago, in desperate need of a way out.

These universities are somehow funded by the Thai government but don’t exercise direct control over them. Top universities are difficult to get into because of their high reputation and they even require entrance exams for enrollment. These universities are accepting new students through central examination and this option is only available for those who study in Thailand.

However, they also have a special program for international students. The most prestigious or highly regarded universities in Thailand are national universities such as:

- Chulalongkorn University
- Chiang Mai University
- King Mongkut's University of Technology Thonburi
- Mahidol University
- Thammasat University

Rajabhat Universities & Rajamangala Universities of Technology are state universities created with the primary purpose of providing education in the regional provinces of Thailand. Rajabhat universities focus primarily on general education while Rajamangala universities focus on engineering and technical courses. The most notable Rajabhat and Rajamangala universities include:

- Rajamangala University of Technology Krungthep
- Rajamangala University of Technology Phra Nakhon
- Suan Dusit Rajabhat University
- Chiang Rai Rajabhat University
- Rajamangala University of Technology Rattanakosin

Private Universities

Private and international universities are the top priorities of international students because of the diverse student and staff communities found at these institutions. These are universities with higher tuition fees and easier to get into compared to national universities. All of the international universities in Thailand fall under this category, which include such universities as:

- Assumption University
- Webster University Thailand
- Stamford International University
- Bangkok University

Open Universities

Open universities offer the cheapest tuition fees and students are not required to attend lectures, because their courses are offered either online or distance or supported learning. These are universities with open door academic policies and they have little to no entry requirements. There are only two open universities in Thailand, namely:

- Sukhothai Thammathirat Open University
- Ramkhamhaeng University

Most Universities offer only in **Thai Programs**. These programs are only taught in Thai language as the name suggests and are mostly taken by local students or students who are fluent in Thai. All Thai universities offer these types of programs. On the other hand they have also a **Bilingual Programs** wherein this kind of program is taught in Thai and English but as time goes by, teachers or instructors are slowly eliminating the local language. They are doing this in order to prepare the students to adjust themselves for English-only instruction later on. This is meant for Thai students who are beginning to study the international language. The last one is the **International Program**, in this program it is absolutely offered in full English language which is sometimes based on the curriculum of other country, like the American, British and Singaporean curriculum. There are several Universities who offer this kind of program, especially at private institutions. It is vital to determine the differences of each program in order for you to know what will fit to your language proficiency and your schedules. Please note that most universities will offer a combination or all three of these types of programs.

Costs

One of the biggest factors that an international student is considering is the cost. Tuition fees in Thailand are much cheaper than those in most other countries in the world especially in Europe. As a matter of fact Thai Universities are considered least expensive universities in the world for international students. The table below provides an estimate of the cost of education in Thailand and the actual costs as of this year 2018. Please bear in mind that fees will depend on the type of program, field of study, and also schedule.

EXPENSES	MAHIDOL UNIVERSITY	RAJAMANGALA UNIVERSITY OF TECHNOLOGY KRUNGTHEP	STAMFORD INTERNATIONAL UNIVERSITY	RAMKHAMHAENG OPEN UNIVERSITY
Yearly Tuition Fees	161,000 baht	60,000 baht	181,500 baht	72,000 baht
International Student Fees	15,000 baht	15,000 baht	15,000 baht	-
Education Fees	3,300 baht	7,350 baht	5,000 baht	11,200 baht/Term
Later Registration Fees	1,000 baht	100 baht per day	300 baht per day	100 baht per day
Late Payment Fees	100-1,000 baht	100 baht per day	300 baht per day	100 baht per day
Accommodations per month	5,000 - 6,000 baht	4,600-10,300 baht	4,600-10,300 baht	3,500 - 5,500 baht

Students will normally choose Bangkok or Chiang Mai as a place to study as they have the largest expat community in the country. Although Bangkok is infamous for having traffic jams, universities are very accessible by train system and various transportation modes. Thai universities have strict attendance policies and you wouldn't want to be late or miss your class because you were stuck in traffic.

Accommodation is also another important factor to consider while living in Thailand. Most public universities offer on-campus accommodations or dormitory. Some of them will just allow you to stay for a month while you are still looking for accommodation outside the campus. The institutions sometimes do tie up with different apartment buildings. Those buildings close to the campus offer discounts to students, promos, or shuttle van that will send you directly to the campus. If your university is in the city center, it is highly advised to choose a place near BTS or MRT stations.

Thai universities offer the most value as compared to the rest of the world. They offer a good quality of education at a very affordable cost. Make sure that the university that you are applying is highly accredited and has a good reputation. You can read blogs and reviews of students on different platforms. Make sure to choose a university where they could accommodate you with your needs while staying in the kingdom. Check if the institution will be able to provide you the necessary documents. They must go for extra mile in supporting you while you are still adjusting. The highly-rated national universities have an edge over most other universities in Thailand due to their high local and international rankings. These universities have also existed much longer than the relatively new international universities. I would advise looking up student alumni groups on Facebook and either asking some questions regarding the Thai marketplace for graduates. Thailand has strict laws that govern how companies hire foreign employees, so it's important to look at universities that have industry partnerships with international companies, companies with interests outside the borders of Thailand, or BOI promoted companies.

In terms of library access, which predominantly important for students, mostly, if not all, universities are equipped with libraries. The only factor that differentiates them is accessibility. Most public Universities do have a massive library where you can borrow popular books but the problem is the operating hours. Recently, Chulalongkorn University operates its library for 24 hours a day 7 days a week. Sometimes books are only available with local language. Fortunately Thailand has a good and cheap internet access, so just in case that your book isn't available, Mr. Google is ready to serve you.

Financing your education is really stiff that's why various institutions are offering scholarships from the government, the royal projects, and the university itself. Usually they offer it to highly qualified students with academic outstanding. Don't be shy to ask the admission department for different scholarships. There are different kinds of scholarship, so give it a try.

Resources for Students

It's also important to save emergency contacts in either your cell phone or computer in case you find yourself in a situation where you need help. Below are some of the most important resources I think you'll need to make studying at a Thai university easier..

- **Student Facebook Groups**

Most universities have student-created Facebook groups where they are free to express themselves and get answers to any questions they might have. Student Facebook groups are not meant to replace your admissions counselor, but you'll be able to get honest advice from the student community in these groups and answers that you won't necessarily find on the university's website.

- **Thai Expat Groups**

There are several Thai expat groups on Facebook where you can easily ask general questions, such as where to find the best Thai food or where to get a haircut. Some of the most useful expat Facebook groups include:

- Thailand Starter Kit Community,
- Bangkok Expats
- Expats in Bangkok
- Bangkok Expats Classifieds Forum

- **Emergency Services**

The numbers listed below are the Emergency numbers in Thailand. It is very helpful for an expat to remember these numbers. You might not know when and where you are going to need them.

SERVICE	NUMBER
Police	191
Fire Department	199
Tourist Police	1155
Tourist Service Center	1672
Medical Emergency	1669
Ambulance and Rescue	1554
Highway Police	1193, 02-354-6007
National Disaster Warning Centre	1860

Conclusion

Being an international student needs courage and proper planning since it needs a lot of considerations before pursuing your dreams and plans. Expensive but somehow rewarding because

1. It will help you boost your confidence.
2. Be an eye opener for different cultures and beliefs
3. A great advantage in terms of applying for a job soon
4. A great experience for self-improvements
5. It will mold you into a better person.
6. You will learn to be independent.
7. You will realize the importance of career.
8. You be more open and stronger to any circumstances that might come into your life.

Suggestion

Since studying abroad or becoming an international student needs lots of courage, determination and adequate financial support, it is advisable that you.

1. Think and plan it well and carefully.
2. Do more research and gather more information about the country, university and course that you plan to choose.
3. Weigh all the expenses as much as you can if your budget or savings can support your studies.
4. Ask yourself if you are willing to embrace the different culture and beliefs.
5. If you think the university in your country is better than that the other country, we suggest you to stay.

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THE RELATIONSHIPS AMONG SOCIAL ENGAGEMENT IN WECHAT, FAMILY COMMUNICATION PATTERN, AND FAMILY SATISFACTION AS PERCEIVED BY YOUNG CHINESE ADULTS

Kunlin Li

E-mail:kunlin419@gmail.com

Bangkok University

Master of Communication Arts (Global Communications)

Advisor: Asst. Prof. Dr. Pacharaporn Kesaparakorn

Email: pacharaporn.i@bu.ac.th

ABSTRACT

This study aimed to explore the relationships among social engagement on WeChat, family communication pattern and their family satisfaction as perceived by Chinese young adults. Two hundred young Chinese adults whose aged were 18-25 years old and were currently WeChat users were selected using snowball sampling method to participate in the online survey. The data was tabulated and analysed using Chi-square and One-way analysis of Variance (ANOVA) at the significance level of .05. The findings revealed as follows: (1) Young Chinese adults' social engagement on WeChat with parents significantly influenced their family satisfaction. It means that the longer young Chinese adults used WeChat with their parents, their level of family satisfaction will be higher significantly; (2) the young Chinese adults who had different family communication pattern exhibited significantly different level of family satisfaction. Most importantly, the consensual young Chinese adults exhibited significant higher satisfaction than laissez-faire young Chinese adults, pluralistic Chinese young adults, and protective young Chinese adults, respectively.

KEYWORDS: Family Communication Pattern, Social Engagement on WeChat and Family Satisfaction

1. Introduction

The Internet is the upgrading of traditional industries. Internet promotes online interaction among senders and receivers via instant messenger. Nowadays, the ways of communication between individuals have changed. Instead of face-to-face communication, people can communicate with each other by text, voice, and video through instant messenger applications. The Internet has become an indispensable part of our life. After

mobile network has developed, we can deliver and receive timely information. It makes our life more convenient and brings a new way to make friends. WeChat is one of the social network applications allows us to send and receive instant messages.

WeChat is an instant messenger application that launched by Tencent Inc. in January 21st, 2011. It supported mobile phone users to communicate with each other by sending and sharing audio, video, and photo messages through the Internet. It is a comparatively new way of chatting compare to previous short message service (SMS) and multimedia messaging service (MMS). Because WeChat is a free application, it has become increasingly popular over these years.

With the influence of the Chinese traditional culture, Chinese parent-child relationship is relatively distant, especially father-son and mother-daughter relationship. Parents have all powers in the family (Gong, 2007). The traditional communication model cannot satisfy the modern parent-child communication, specifically the children study far away from their parents.

The emotional warmth of parents can bring positive emotions to their children and help them form independent, confident and self-respecting personality to promote the development of mental health, thereby increase children's family satisfaction and happiness. Zheng mentioned that there is a significant correlation between children's happiness and parents' breeding model. And, there was a positive correlation between parents' understanding and children's happiness. On the other side, there was a negative correlation between parents' over-control, rejecting, and children's happiness (Zheng, 2010).

A research examined 801 college students from four universities in Henan province in China, and they found that students can perceive communication with their mother than father. In the four-type FCP, there was more communication in pluralistic family, followed by protective family, laissez-faire family, and finally is consensual family (Gao and Wei, 2009). Different type of family communication pattern had different family happiness, and family communication pattern were correlated with parent-child communication and family happiness.

With the emergence of subjective well-being studies, the researchers recognized the significance of satisfaction affecting youngsters' mental health. Life satisfaction is the overall evaluation of the quality of life. And, family satisfaction relates with life satisfaction. It is a specific evaluation of the family. According to the research, a researcher found young adults' family satisfaction was influenced by four factors: parenting style, the relationship between parents and children, family environment and how parents know about their children (Qiu, 2008). In the study, parenting style emphasizes parent's power, how parents know about their children, and how parents encourage their children to express their opinion. Therefore, in this research, parenting style and how parents know about their children are partial to concept orientation and social orientation in family communication patterns (FCPs).

2. Research Objectives

(1) To examine how variation in frequency of social engagement in WeChat influence young adults' family satisfaction.

(2) To examine how variation in self-perceived family communication pattern influence young Chinese adults' satisfaction toward family.

3. Research Framework

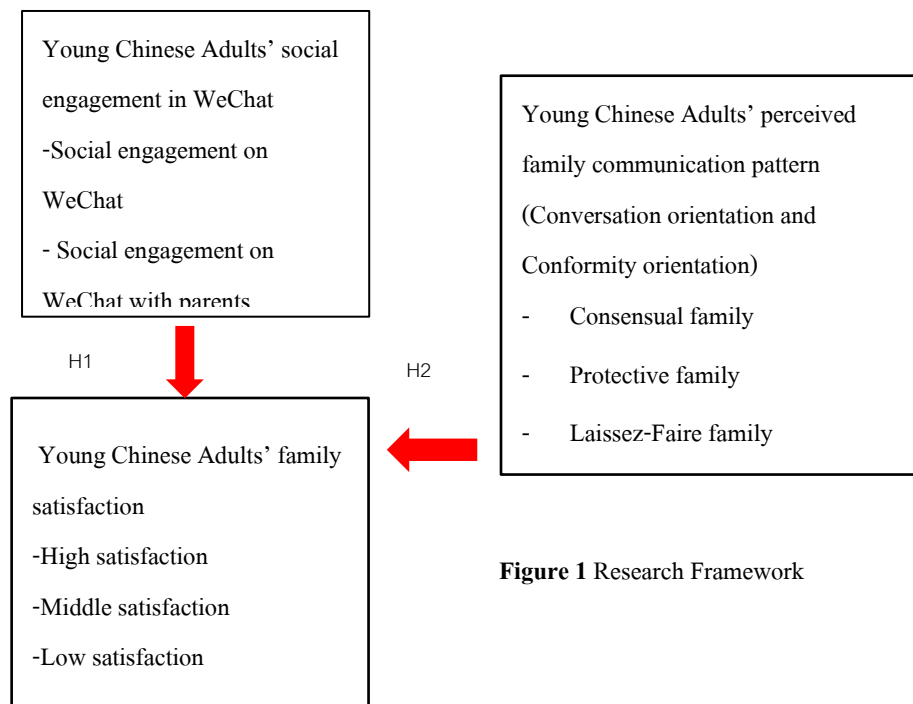


Figure 1 Research Framework

4. Research Methodology

4.1 Research Design

A survey research was conducted to examine the relationships between social engagement on WeChat and self-perceived family communication pattern, self-perceived family communication pattern, and family satisfaction among the 200 young Chinese adults.

4.2 Population and Sample

The non-probability sampling is deemed suitable for this study. And the target were Young Chinese adults that defined above. The samples of young Chinese adults were 200 respondents who have been using WeChat in the past one year and their ages were between 18-25 years. The sample was selected using snowballing sampling, because not Chinese people are using WeChat to communicate with their parents. To facilitate the data collection process, online survey was utilized to reach out more respondents. After completing the questionnaire, respondents were asked to recommend some friends who were willing to join the research.

4.3 Variables

The independent variable was young Chinese adults' frequency of social engagement in WeChat with their parents and their perceived family communication patterns; and the dependent variable was their family satisfaction.

4.4 Research Instrument

Ritchie and Fitzpatrick's Revised Family Communication Pattern (RFCP) was employed in this study (Ritchie & Fitzpatrick, 1990). The scale had 26 Likert-scale questions, measuring conversation-orientation and conformity-orientation. Four-type family communication patterns were classified depending upon the level of their conversation orientation and conformity orientation. The four types of family communication included consensual family, protective family, pluralistic and laissez-faire family. For the reliability of the original scale, the conversation orientation had .84 to .94 Cronbach alpha and the conformity orientation had .72 to .84 Cronbach alpha.

Young adults' perceived family satisfaction towards their parents was measured from Olson's family scale (2004). This scale consisted of 10 Likert-scale questions, ranging from 5 "Very satisfied", 4 "Satisfied", 3 "Neutral", 2 "Dissatisfied", and 1 "Very Dissatisfied." The Cronbach alpha of Olson's Family Satisfaction Scale is 0.92.

4.5 Data Collection

After the questionnaire designed, the questionnaire was translated in Chinese language, and adjusted the grammar, words order and wording by 3 Chinese persons who are fluent English. And then, the Chinese translation was translated in English. Compared with the original English source and the second English translation, there was no difference on meaningful of questionnaire. Finally, the questionnaires were distributed to 46 Young Chinese adults for pretest. The questionnaire of this study was pretested, having more than .70 Cronbach alpha for all parts.

When the 46 data were collected and pass the reliability test, the researcher modified and adjusted the form of the questionnaire according to informants' opinions. After that, the questionnaires were distributed to young Chinese adults on WeChat. It took about two weeks. Two hundred respondents participated in this research.

4.6 Data Analysis

One-Way ANOVA was used to analyze hypothesis 1 and hypothesis 2.

5. Research Findings

5.1 Summary on Descriptive Results

The descriptive findings of the sample is primarily characterized by female (70%, n=140) and male (30%, n=60). In these samples, aged level was 18-22 years old (61.5%, n=123), followed by sample aged 23-25 years old (25%, n=50). About their occupation, more than seventy percent samples are student (71.5%, n=143).

In respect to their education level, 68% of sample finished their bachelor's degree, followed by Master's degree (21.5%, n=43). Last part, 85% sample already add their parents' WeChat (n=170), and followed by 12.5% of sample did not add their parents, because their parents did not use WeChat. Majority of the sample had medium satisfaction toward their family ($\bar{x}=3.56$, $SD=.81$). The descriptive results showed that majority of the respondents came from pluralistic family (37%, n= 74), followed by consensual family (22.5%, n= 45), protective family (20.5%, n= 41) and laissez-faire family (20%, n= 40), respectively.

5.2 Summary of Inferential Findings

Hypothesis 1: Young Chinese adults' frequency of social engagement in WeChat significantly influence their family satisfaction.

One-Way ANOVA analysis in Table 1 revealed that young Chinese adults who engaged in WeChat with their parents per day had significant different perceived family satisfaction ($F_{(200, 4)} = 9.191^*$, $p < 0.05$) but those who engaged in WeChat per day had no significant effect on their family satisfaction ($F_{(200, 4)} = .638$, $p > .05$).

Table 1 One-Way ANOVA tests between the effects of young Chinese adults' frequency of social engagement in WeChat and their family satisfaction

Effects	F	df	Error df	p
The frequency of social engagement in WeChat a day	.638	4	.057	.636
The frequency of social engagement in WeChat with parents a day	9.191**	4	.057	.000

Note: $p^{**} < 0.05$

The further employed to examine the effect of frequency of social engagement in WeChat with parent affect the young Chinese adults' family satisfaction. The findings revealed that the Young Chinese adults who rarely engaged in social engagement with their parents per day had significant family satisfaction from those who sometimes ($MD=.47531^*$, $p < 0.5$), often ($MD=.47164^*$, $p < 0.5$), frequently ($MD=.84326^*$, $p < 0.5$), and most frequently ($MD=1.23142^*$, $p < 0.5$) engaged in WeChat. It was found that all of "rarely" respondents had negative effect on their family satisfaction. Those who sometimes, often, frequently and most frequently engaged had a positive effect on their family satisfaction.

Hypothesis 2: Young Chinese adults who were characterized by different perceived family communication pattern (consensual, pluralistic, protective and laissez-faire families) will have significantly different levels of family satisfaction.

One- Way ANOVA analysis in Table 3 found that the perceived family communication patterns significantly influenced their family satisfaction ($F_{(200, 3)} = 33.427^*$, $p < 0.5$). Thus, hypothesis 2 was supported.

Table 2 One-Way ANOVA Tests between the young Chinese adults self-perceived family communication pattern and their family satisfaction

	<i>F</i>	<i>df</i>	<i>Error df</i>	<i>p</i>
Family communication pattern	33.427**	3	.057	.000

Note: $p^{**} < 0.05$

The findings further revealed that consensual respondents had higher family satisfaction than protective respondents ($MD = .86325^*$, $p < .05$), laissez-faire respondents ($MD = .54167^*$, $p < .05$). Pluralistic respondents had higher family satisfaction when compared with consensual ($MD = .31928^*$, $p < .05$), protective ($MD = 1.18253^*$, $p < .05$), and laissez-faire ($MD = .86095^*$, $p < .05$). Laissez-faire respondents had higher family satisfaction than protective respondents ($MD = .32159^*$, $p < .05$). It was found that protective respondents had negative effect their family satisfaction on consensual respondents ($MD = -.86325^*$, $p < .05$), pluralistic respondents ($MD = -1.18253^*$, $p < .05$), and laissez-faire respondents ($MD = -.32159^*$, $p < .05$), respectively. Laissez-faire respondents had negative effect their family satisfaction on consensual respondents ($MD = -.54167^*$, $p < .05$), and pluralistic respondents ($MD = -.86095^*$, $p < .05$). And consensual respondent had negative effect on ($MD = -1.18253^*$, $p < .05$).

6. Discussion

6.1 Discussion for summary of descriptive findings

According to the data analyzed, the finding support Huang (2013) that found that significant correlation between the young Chinese adult's social engagement on WeChat and their family satisfaction, and also have significant different between 4-type family communication pattern and their family satisfaction. the viewpoints of she said respondents presented the different family communication level between adolescent use social media tool and adolescent did not use social media tool, and in her research, she pointed out different family communication pattern will show different family satisfaction level, and pluralistic family showed the higher family satisfaction than another types. And Huang's (2013) viewpoint were supported to this research findings.

6.2 Discussion of Inferential findings

Hypothesis 1: Young Chinese adults' frequency of social engagement in WeChat significantly influence their family satisfaction.

To test hypothesis 1, One-way ANOVA analysis revealed that young Chinese adults who engaged in WeChat with their parents per day had significant different perceived family satisfaction, but those who engaged in WeChat per day had no significant effect on their family satisfaction. And the findings coincided with the previous studies which found that social engagement on WeChat can change the traditional family communication model and make the child increase more satisfaction because WeChat communication can promote spontaneous two-way communication between parents and young adults. Thus, WeChat usage can satisfy their needs especially the interpersonal communication and relationship among Chinese family. Meanwhile, use of WeChat can meet the satisfaction of young adults to a certain extent. And the findings also coincided with the use and gratification theory which posited that people use internet (social media) to satisfy their different psychological needs and improve their life satisfaction, such as to promote the self-gratification, seek self-worth, vent and express psychological feelings. This study highlighted the positive impact of social media like WeChat to promote exchange of ideas and manage interpersonal relationship between Young Chinese adults and their parents.

Hypothesis 2: Young Chinese adults who were characterized by different perceived family communication pattern (consensual, pluralistic, protective and laissez-faire families) will have significantly different levels of family satisfaction.

To test hypothesis 2, One-way ANOVA analysis revealed that sample's different family communication patterns significantly influence their level of family satisfaction. These results supported the previous study of Gao and Wei (2009) which found that students can perceive communication with their mother and father. Among the four-type FCP, there was more communication in pluralistic family, followed by protective family, laissez-faire family, and finally consensual family, respectfully. Different type of family communication pattern had different family happiness, and family communication pattern were correlated with parent-child communication and family happiness. And, there was a positive correlation between parents' understanding and children's happiness. On the other side, there was a negative correlation between parents' over-control, rejecting, and children's happiness (Zheng, 2010).

When analyzing how different self-perceived family communication pattern influence their family satisfaction, the LSD analysis further showed that consensual respondents had higher family satisfaction than protective respondents, laissez-faire respondents, respectively. Pluralistic respondents had higher family satisfaction when compared with consensual, protective, and laissez-faire, respectively. Laissez-faire respondents had significant higher family satisfaction than protective respondents. We found that protective respondents had a negative effect on their family satisfaction at the statistical significance, when compared to consensual

respondent's pluralistic respondents, and laissez-faire respondents, respectively. In addition, laissez-faire respondents had negative effect on their family satisfaction at the statistical significance, when compared to consensual respondents and pluralistic respondents. Therefore, the result of this part showed that hypothesis 3 was also supported. This study supported past studies of Qiu (2008) which found that young adults' family satisfaction was influenced by 4 factors, including parenting style, the relationship between parents and children, family environment and how parents know about their children. In this research, parenting style and parents know about their children were correlated to concept orientation and social orientation in family communication pattern. In Qiu's research (2008), they found that parenting style emphasizes parent's power and how parents know about their children, and how parents encourage their children to express their opinion or not. This study supported the assumption of Family Communication theory which posited that the family communication is shaped by the conversation orientation and confrontation orientation. Conversation orientation emphasizes how parents encourage their children to express their opinions and to accept different opinions and conflicts. Conformity orientation emphasizes how children show obedience to their parents. Thus, this study underscored the importance of having open communication with their parents. Both protective respondents and laissez-faire respondents experience low level of conversation orientation with their parents. Protective respondents feel that their parents controlled their opinions and did not let them to express their personal opinion thus their family satisfaction is negative. Laissez-faire respondents feel that their parents did not let them express their personal opinion and also did not show caring or attention to the life of their young adults. However, respondents want their parents to listen to their personal problem and if possible understand them. Parents should not leave young adults with the problems but rather try to understand and help solve their problem. In sum, Young Chinese adults will have positive family satisfaction if they received sufficient level of attention and freedom such as the consensual family and pluralistic family.

7. Suggestions

(1) Suggestion for the further research

According to the limitation of this study the most of samples are come from Kunming city Yunnan province. And Kunming is second-tier city of Chinese city classification. It may limit the result of analysis. And it might be the reason why the data doesn't have obviously difference between family communication patterns. Thus, in order to increase the difference between family communication patterns, the researcher can choose the first-tier city in China, such as Beijing Shanghai and Guangzhou. And the data collection process needs to be modified. In the further research.

(2) Suggestion for the further application

The finding of this study showed that the frequency of communicate with parents on WeChat can increase young Chinese adult's family satisfaction. WeChat can do more for family relation rather than only

being a chatting application. Based on the family relation and family satisfaction, WeChat can enhance family communication and offer open communication between young adults and their parents. For other social media tool, parent-child relation can influence children's future, young Chinese adults are the majority users of social media in China, and social media can lead them to have a good communication with their parents. Practitioners in WeChat and other social networking sites can make of the results to plan a family communication campaign to help family problems among young adults and their parents in China despite the changing lifestyle of Chinese populations where young adults are not living together with their parents.

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The leadership approaches and the prevention for turnover intentions

Assistant Professor Dr. Papada Pitchayachananon

Sripatum International College, Sripatum University

E-mail: papada.pi@spu.ac.th

Assistant Professor Dr. Ravipa Akrajindanon

School of Business Administration, Sripatum University

E-mail: ravipa.ak@spu.ac.th.

Mr. Kriangkai Pookayaporn

Sripatum International College, Sripatum University

E-mail: kraingkai.po@spu.ac.th.

ABSTRACT

The objectives of this paper are to extend the existing knowledge regarding leadership, its definition, and core characteristics associated with the types of managers that make employees voluntarily leaving the company. Employees' intention to leave the company is a serious issue that pressing concern to employers. This paper provides a clear understanding of the leadership approaches and the types of bosses that make employees run away. As it is said 'people quit boss, not jobs', this paper offers the recommendations on the aspect of leadership approaches for preventing turnover intentions.

KEYWORDS: Turnover intention, leadership, transformational leadership, transactional leadership, bad managers, bad bosses

1. Introduction

Turnover intention is one of the most prominent topics in human resource management literature over the past few decades. It is widely accepted that employee turnover costly burden to the organization in terms of finance, effectiveness, and success, just to name a few (Memon, Nor, & Salleh, 2016). The leaving of good employees leads to lowering organization's competitive advantage, decreasing the morale of other employees, as well as reducing productivity (Sanjeev, 2012). In an international survey of 23,400 exit employees conducted by a consulting company expert in employee engagement, retention and human resource known as Work Institute, found that the turnover cost paid by employers was estimated to be as high as \$600 billion (Fox, 2018). Similarly,

the ADP Research Institute (ADPRI) recently reported that five percent of workers leave their jobs each year. The same report also noted that between sixty to seventy percent of all employee turnover is voluntary. These statistics indicate that voluntary turnover is becoming a barrier for companies to achieve their strategic objectives. In spite of employees leaving their jobs voluntarily; voluntary turnover, factors such as the effects of authentic leadership is highlighted as the main causes of employee turnover (Gatling, Kang, & Kim, 2016).

Voluntary turnover is defined as a state of leaving the company by an employees' own decision, whereas involuntary turnover refers to organizations choosing to dismiss employees for various reasons (Harhara, Singh, & Hussain, 2015). Voluntary turnover causes the company on decreasing productivity, profitability, future revenue growth, and customer satisfaction (Treglown, Zivkov, Zarola, & Furnham 2018). Employee Benefit News (EBN) reports that it costs organization thirty-three percent of an employee's annual salary for a replacement. According to the Work Institute's 2017 Retention Report (Valerie, 2018), it is suggested that the indirect costs of employee turnover are rooted from the loss of knowledge and productivity occurred from leaving employees, the loss of time spent on finding a replacement, the financial cost for training new hires until they are fully functional, and the cost of risk losing reputation (Alzubi, 2018).

Employees are the most valuable assets for a company. Apparently, successful companies pay attention to human resource strategies that prioritize the best interest of these assets such as provision for competitive pay scale, creating a conducive working environment, provision of training programs and opportunity for further career path, and the roles of leadership that lead to higher productivity and higher retention among employees. Consequently, the turnover intentions would be reduced and their commitment to the company would be increased, when their needs are served.

2. Aims

The aims of this paper are to present:

- (1) The leadership: definitions and core characteristics.
- (2) The types of managers that make employees voluntarily leave the company.

3. Leadership: definitions and core characteristics

Leadership has different meanings. The interpretation lies in the context surrounded by educational, cultural, and socioeconomic backgrounds. Generally, leadership is a process of influencing by maximizing the efforts of others towards the achievement of a goal. An effective leader is a person who creates an inspiring vision of the future, motivates people to engage with that vision, manages the delivery of the vision, coaches, and builds a team (Northouse, 2018). Therefore, leaders and their leadership styles are a key factor for ensuring the fulfillment of an organizational goal. .

Leadership is broadly categorized into two types: transformational leadership and transactional leadership (Lowe, Kroeck, & Sivasubramaniam, 1996).

Transformational leadership is defined as a leadership style in which the leader encourages his or her subordinates to achieve higher levels of performance through training programs, mentoring, and skill development programs; it is a type of leader that make an impact on organizational growth. The core characteristics of transformational leadership are presented below. The leaders who hold transformational leadership approach will be addressed hereafter as 'the bosses'.

(1) Inner-self-motivation - Motivation has arisen from within and is used as the driving force for effective management. This is because the bosses love what they do and ensure their values are aligned with the company's direction.

(2) Ability to make tough decision – The bosses make difficult decisions based on the company's vision, values, goals, and objectives.

(3) Keep ego in check – The bosses keep their ego under control and put the company first over personal gain.

(4) Ability to take the right risk – The bosses take calculated risks by trusting their instincts after have done their research and gathered intelligence information from their team members. Failure to take the right risk will prohibit change and the ability to grow.

(5) Share collective organizational consciousness – The bosses immerse themselves into the collective organizational consciousness and share it with their team for a mutual understanding and inspiring teams to feel that they belong to the organization.

(6) Adaptability – The bosses are willing to adapt to the dynamic business environment, open their mind to embrace change, and are a lifelong learner.

(7) Warmly open to new ideas – the bosses happily listen to ideas from all levels of their organization and incorporate their insights in making decision. With a culture of openness to new ideas, this leads the organization to grow and succeed.

(8) Inspiration – The bosses have the ability to make an emotional uplift not only from a formal motivational speech or simple recognition for a job well done, but also for their respect each employee as a valued individual and their taking the time to understand what motivates and inspires them.

(9) Proactive – The bosses are proactive decision makers who do not wait for others to make decisions and then react.

(10) Lead with vision – By getting every team member to buy into the common vision, the bosses set a realistic and achievable vision for the organization, communicate the vision to their team, inspire a sense of commitment, and guide them in the direction that is aligned with the company goal.

Even though this leadership style sounds appealing, it also comes with drawbacks. The pros of transformational leadership are (1) it allows for a quick assessment an organization's current situation and formulate a vision for its improvement and growth, (2) it creates an enthusiastic work environment, and (3) it uses intrinsic inspiration and passion to drive and achieve the company goals. The cons of transformational leadership are that while the focus is on the big vision and transformation, (1) these leaders often lack details for the execution and operation and (2) they can overlook reality and truth as they depend too much on passion and emotion.

Transactional leadership is defined as a leadership style in which the leader focuses on supervision, organization, and performance. The leaders use rewards and punishments to promote their compliance and pay attention to followers' work in order to find faults and deviations. While transformational leadership welcomes changes as the path for success, transactional leadership does not welcome changes and keeps things the same. The core characteristics of transactional leadership are presented as below. The leaders who hold transactional leadership approach will be addressed hereafter as 'the bosses'.

(1) Extrinsic motivation approach - The bosses use rewards and punishments to control the team's performances.

(2) Practicality – The bosses' pragmatic attitude is used for decision making. In other words, they take all realistic constraints and opportunities into consideration when making decisions.

(3) Resistance to change - The bosses do not welcome any changes as they do not believe that the changes will lead to a better working conditions or solutions. They want to keep everything strictly the same as there are.

(4) Discourage new ideas – The bosses do not welcome employees to act or think creatively as they believe things are good as they are.

(5) Constrained thinking – The bosses are in a comfort zone when working with an existing system and constraints. Thinking inside the box is the approach for solving problems. Therefore, they have difficulty when face with challenges that require a creative solution.

(6) Passive – Because their prime focus is to maintain status quo, the bosses do not take proactive steps to prevent problems but only react to things that happen.

(7) Directive – The bosses act on the believe that they are the center of all decisions, whereas the team members are strongly required to follow their instructions.

(8) Place high importance on organization structure – The bosses give importance on hierarchy, organization structure, and employ a bureaucratic approach.

Similar to transformational leadership, transactional leadership has both pros and cons. The transactional leadership approach works well when the manager demands maintenance of the status quo, especially in situations which require routine and do not require much of creativity, and in situations with high-pressure of

delivering the task against a deadline. However, their drawbacks include its overemphasis on set routines and methods of doing tasks, its lack of personal bond between leader and followers, and its passive, not proactive, nature which can harm an organizational culture.

4. The types of managers that make employees voluntarily leave the company.

It has been said that ‘people (employees) do not quite their jobs; they quit their bosses. The immediate/direct superiors are not only potential causes of employee turnover, but they are also primarily responsible for workplace conditions, highlighted in many theories, that spur turnover intentions and resign. Not surprisingly, when asked, leavers often mentioned that unfair and abusive supervisions are a prime reason for their leaving. On the other hand, turnover literature on leadership effects has documented the subordinate relationship with superiors may affect the employees’ decision to resign or stay (Waldman, Carter, & Hom, 2015).

A number of authors in the human resource field wrote their blogs backed up by research regarding people leaving the bosses not the companies. For instance, Hyacinth (2017) contends that the number one reason that people quit their jobs is that they are not happy with their boss or immediate supervisors, and according to a Gallup poll whose data were collected from of more than 1 million U.S. workers, this is accounted for seventy-five percent of voluntary turnover. The study has led the author to conclude that there are four types of bad bosses that make employees want to quit the: Marionette, King Kong, Superman, and Taskmaster companies. First, the ‘Marionette’ is the type of bosses who focus on playing it safe to preserve their position and privileges, who follow orders, and never stand up for the team or question policies. This type of leader very often results in employees losing their passion for the jobs. Second, the ‘King Kong’ is the type of bosses who retain a supremacy complex and like to draw a clear line between management and staff, resulting in employees feeling inferior and perceiving themselves as having no values and respect. Next, the ‘Superman’ is referred to the bosses who act as if the organization revolves around them and behave like the company is their own empire. The behaviors can be easily spotted when they make the decision solo, ignore feedback while takes credit. This type of leader often results in employees feeling depreciated and withdrawing their engagement. Last, ‘Taskmaster’ is the type of bosses who place a high weight on micromanagement, resulting in employees feeling suffocated from being kept monitoring for every move they make. This type of leader makes employees feel demoralized, and it eventually kills their creativity. These four types of bad bosses can be said to possess some characteristics of transactional leadership. ‘Marionette’ can be seen as a passive leader; ‘King Kong’ can be seen as having a characteristic of placing high importance on organization structure; ‘Superman’ can be seen as having a combination of resistance to change and discouraging of new ideas, and ‘Taskmaster’ can be seen as one who possess a combination of directive and extrinsic motivation approach to management.

5. Conclusion

Employee turnover poses a serious problem for an organization because it can incur great damages and losses. Human resource scholars have produced a long list of losses associated with talents leaving the organization, which include the loss of productivities, loss of tacit knowledge leaving employees take with them, the additional financial burden associated with finding a replacement and training new employees, and perhaps credibility and reputation. Turnover intentions can be prevented before the employees finalized their decision to leave the firm or organization. Since bad bosses are widely blamed as one of the causes, the roles of leadership can heal the situation in the long run. This paper is designed for three groups of readers; people who are currently working as a supervisor or boss, prospective bosses or people who are going to be the boss some day, and human resource personnel. This paper provides a clear understanding about the meaning of leadership, leadership approaches and characteristics, and pros and cons of each leadership style. The reader can use his or her own personal experience with the bosses to identify their characteristics and leadership styles. Furthermore, the readers may reflect and trace the cause or causes of their own, or their colleague's decision to leave the job. Among the reasons for such a decision would probably be because of a bad boss, the boss would deem the employees unfit for the company. The main types of bad bosses are discussed above to help the bosses understand their leadership style and identify what type of leader or boss they belong. If they realize that their leadership approach is likely to be the cause for employee dissatisfaction and turnover, they can change or adjust their management styles to mitigate and prevent the problem. Though a manager or supervisor cannot make every employee happy, he or she can create a working environment that makes the employees feel they are valued and want to stay on company that turns unhappy, dissatisfied employees to become satisfied, thus preventing them leaving.

6. Recommendation

Goler, Gale, Harrington, and Grant (2018) stated that of those who stay at the company, thirty-one percent are found to enjoy their work; thirty-three percent are found to be able to use their strengths, and thirty-seven percent are found to feel confident that the work positively contributes to their skills and experiences. This highlights three key ways that managers can exercise and balance their leadership approaches to keep valuable assets and prevent turnover intentions. Below are some recommendations for managers with both transformational and transactional leadership approaches to consider.

(1) Crafting jobs for enjoyment: Managers with transformational leadership approach could use their vision and inspiration approach to look for ways to bring an employee's passion into the jobs. Along with the big vision and goal, a small win would help employees enjoy and become excited with their jobs. Managers with the transactional leadership approach could use their extrinsic motivation approach, focusing on rewards rather than punishment. A small reward will make employees feel happy and valued.

(2) Bringing in underutilized strengths: It is a sad truth that job descriptions sometimes limit the ability of employees to use the full range of their skills. It is an opportunity for smart managers to create an opportunity for employees to use their strengths. Managers with the transformational leadership approach may empower the employees to make a risk decision upon their supervision and may allow them to take a project they have proposed for the best interest of the company. Managers with the transactional leadership approach, in a situation which requires highly routine jobs, may design a job rotation to extend their underutilized strengths.

(3) Making it possible to continuously develop a challenging work: Although a challenging work brings stresses, the support provided by their boss will make employees overcome the obstacles. The challenging work helps employees improve their knowledge, skills, and valuable experience. Managers with the transformational leadership approach may use a combination of their characteristics such as openness to new ideas, keeping their ego in check, and inspiration, to encourage the employees' work progression. Managers with the transactional leadership approach may minimize the use of their directives and emphasis on practicality to set the employees free to acquire new skills and experiences.

Finally, it should be kept in mind that people will not leave jobs that they believe are not worth leaving. It is a role of smart managers to design a job to be enjoyable and meaningful to their employees. With these recommended approaches, turnover intentions could be minimized and prevented and talented employees could be kept as an invaluable asset.

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International Expansion of EMNEs: a systematic literature review and future directions

Mr. Puttipong Anantasopon

International College, Sripatum University

E-mail: puttipong.an@spu.ac.th

ABSTRACT

Objectives: This paper aims to review a literature review in the field of the international expansion of EMNEs. This literature review will provide the published articles and methodologies related to the studies of internationalization of EMNEs.

Methodology: the research reviewed the article that has published regarding the internationalization of EMNEs in the top international management (IM) journals in the period of 2006 – 2018.

Findings: The paper identifies a number of theoretical inconsistencies in existing research that arguably cause ambiguity in finding and suggest in future research directions comprising of international strategy, institution development and government supporting.

Conclusion: The analysis illustrates that the research in the field of international expansion of EMNEs can be improved through finding a new methodology such as case-studies or more sampling data. In this time, there is clearly biased studying toward China, while other EMNEs is still undeveloped.

KEYWORDS: Emerging market, institutional development, governmental institution, international expansion

1. Introduction

Over the past decade, most multinational investments have come from developed countries. But nowadays, multinational enterprises from emerging countries (EMNEs) are increasingly invested in both of developed and developing countries. The United Nations (2018) refers to the Chinese and South East Asia economy contributed about two-third of global growth. The statistical data of UNCTAD (2018) represent to Outflow of foreign direct investment (OFDI) of EMNEs is about \$1.43 trillion in 2018. This accounts for approximately more than two third of OFDI in the whole world (OFDI, 2018). It is notable that the speed of this OFDI from EMNEs has rapidly increased in the past decade. According to UNCTAD, the OFDI from developing countries in 2008 and 2018 has totaled \$ 381 billion and 671 billion respectively. This indicates that the rate of increase over this ten-year period is 92%.

Hence, the OFDI of EMNEs is clearly more attraction which is of high importance and interest. A large number of Emerging markets have more attraction into academic interests (Buckley et al. 2014). The rising of OFDI from EMNEs is a phenomenon that important theoretical and empirical study. However, extant research on the subjects has largely focused on OFDI of firm's performance from developed countries (Buckley et al., 2007; Peng et al., 2008; Fu et al., 2018) or examined the existing theory, and the theoretical development of and empirical evidence on its impact on MNCs, expansion is remaining scant (Jormanainen and Koveshnikov 2012). For example, previous studies point to the importance of the firm performance and capabilities requires to manage new acquisition by a cooperation strategy with a local partner (joint ventures) when investing in developed country (Buckley et al., 2014), OFDI motives' (Jormanainen and Koveshnikov 2012), there is one empirical evidence of Wu & Chen (2014) agreed that there is impact on firm' home country expands to international market. It is also important to international expansion as firm track or map their performance against rival companies in host countries. The majority of studies found that EMNEs is less to expand the market to developed countries and especially to those countries where there is low regulatory and control corruption is lower. However, there is one studied of evidence EMNEs' expansion by Kalotay and Sulstatova (2010) found that Russia and China are initiated the MNEs expansion to developed countries such as USA, Canada and UK. Europe is a popular host country destination, caused there are availability of advanced technology, and management & operation methods Fu et al., (2018). Most emerging economy government from "BRIC" (Brazil, Russia, India, and China) encourage to local firms to go global (WIR, 2008; Luo, 2010).

In fact, the emergence of new players in sectors of ICT in manufacturing such as Alibaba and Huawei the acquisition of IBM by Lenovo from China, Automobile industry such as Tata from India, Proton from Malaysia. These firms have entered to global market competition, while many others in global business area has more challenge with the inconvenience status that can be the weak competitiveness of EMs compared to local companies in developed countries. For example, Thailand frozen products were blocked by EU and USA commission due to human trafficking (Bangkokpost, 2018), environmental obstacles to internalization by cutting of price selling below cost and planning to raise after eliminating local rivals (dumping-market). There is one proposed by Wu & Chen (2014) government ownership may intervene with the aspects of institutional environments, not to support for legitimacy.

2. Research Objectives

The main objective of this research is to examine the characteristics of international expansion regarding of EMNEs.

Consequently, the objectives of this research are as follows: -

- To assess the publication on the international expansion of EMNEs in top international management journals published between 2006 – 2018.

- To reveal the major topics regarding of international expansion that need to be addressed.
- To clarify the existing literature that provide series for future research directions in the field of the international expansion regarding of EMNEs.
- To conclude the published articles and contribute to the understanding of the international expansion regarding of EMNEs.

3. Methodology

A methodology approach was taken as systematic literature review. It was performed in the first section to select the article of the most relevant articles to be included in the analysis and structured review of the extant literature (Tranfield et al., 2003; Petticrew and Robert, 2006). In the beginning of methodology was to identify an evidence base to be included in the study, in order to ensure that high-quality research studies in the field of international business management were reviewed. If there are some articles, not relevant will be excluded (e.g. replicable, aggregative, and algorithmic (Deryer and Tranfield, 2009).

3.1 Article Selection

The most inclusive and justified list of top management is reviewed by Zhang., (2016). It includes seven journals: Academy of Management Review (AMR), Journal of International Business Studies (JIBS), Journal of World Business (JWB), International Business Review (IBR), Management International Review (MIR), Journal of International Management (JIM), Journal of Business Research (JBR) Management Organization Review (MOR) and International Business Review (IBR). These journals also have high impact factors by CABS (Chartered Association of Business Schools) ranking these journals into review due to which rank top among international management journal. Using assessment, a high impact factor, which can be measured a quality journal. These are found at the list of 9 Journals. The selection of journal in high quality has supported to contribute academic development (Dubois and Reeb, 2000; Acedo and Casillas, 2005; Judge et al., 2007)

3.2 Review procedure

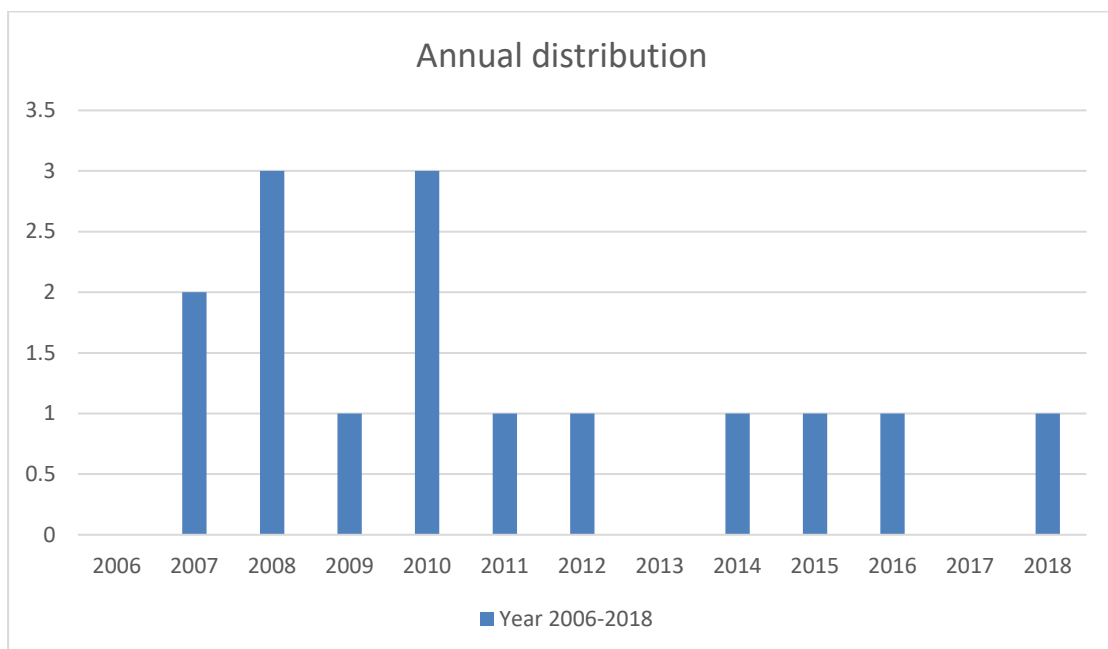
The researcher has chosen for review is the 12 years from 2006 – 2018. Because there are some studied about developing countries in late 2000 (Jormainen & Koveshnikov, 2012). There are also varied of countries that belong to emerging markets, developing markets, and transition markets (Unctad 2018), for the purpose of this study, only focus what countries exclude rather than what countries include. This study pointed out mainly focused on East Asia (e.g., China) and South East Asia (e.g., Malaysia, Indonesia, Philippines, and Thailand). The researcher chose 2006 as this point for two reasons. The first is that economic growth in late 2006. Secondly, these countries have a highly acceleration of economic with EMNEs in the early stage of international expansion.

To select the articles to be reviewed, the researcher conducted a systematic literature review on all articles relevant to this study. The researcher identified into two sections of keywords. The first group of keywords includes with the main theme of international expansions or international activities (e.g. “OFDI, “Outbound FDI”,

“acquisition”, “foreign expansion”, “foreign investment”, and “international expansion”). The second group of consists of the description about emerging markets (e.g. “emerging economies”, “emerging markets firms”, “developing countries”, “emerging market multinational enterprises”, and “transition economies”). After the researcher has set the keywords, the researcher conducted a literature search in the SCOPUS – WILEY ONLINE LIBRARY – PROQUEST database. The research has listed the key words though all issues of the selected journals and read carefully with the title, abstract, introduction, and a whole article.

To assess this selection, the researcher excluded dissertation, book reviews, conference papers, and short-notes. To ensure the all articles have selected regarding of international expansion of EMNES. This process yielded 16 identified articles. The researcher identified four main themes: methodology, country selection and ranking journals, and major topics. In order to improve the research in this field and precision in this theme. For example, the researcher has focused on both qualitative and quantitative methodologies were used by study in this field, how the evolution of theories was adopted, and the holistic approach of theoretical development was deployed.

3.3 Review results



The annual distribution of published article published is shown in (Figure 1)

This provides an important part of annual distribution of publication from year 2006 to 2018. The data displays a scrolling up and down. The majority of publications on this topic have been published in 2008 and 2010. Another interest finding relates to articles in a year of 2006, 2013 and 2017. There is no publication during this period.

4. Emerging topics

The researcher reveals two identifiable topical themes address in previous studies (as shown in Table 1). The number of articles contained within each topic. The internationalization strategy of EMNEs is the largest focus area which has 9 articles or 60%. The second largest is the institution and government supporting, and firm performance.

4.1 Internationalization strategy

Zhao & Zou (2002) investigated that the propensity of export companies is a focal on the country where is located in coastal areas less than the country located in inland areas, Zhao & Zhou examined the international expansion of Chinese companies. They presented the Chinese firms' OFDI was positively correlated with product diversification, location and costs. In subsequent, most studies investigated location choice or attraction county as well as joining with local partner for entering strategy for EMNEs's (Buckley et al., 2007; Cuervoe-Cazurra & Genc, 2008; Morck et al., 2008; Kalotay & Sulstarova, 2010). These researchers rely on the characteristic of international expansion' strategy of EMNEs.

On location choice, one major finding is that EMNEs has a lack of market-supporting institutions and inadequate of legal from host country. This is due to the expertise of EMNEs has operated in weaker legal conditions (Park & Luo, 2001; Chen & Wu, 2011; Luo & Zhang, 2016). On the topic of entering strategy mode is joint venture (Wu & Chen, 2014), strategic alliance and merger & acquisition (Gubbi et al., 2010). Several scholar key factors found that the successful international expansion of EMNEs can join with foreign firms to acquire through overseas subsidiaries to extend their homes bases, and to enhance international experience.

4.2 Institution development and government supporting

The researcher has provided two perspectives to explicate this phenomenon: institution development and government supporting perspectives. There are two major problems reveals that the problem of EMNEs is an institutional constraint (e.g. institutional development, strategic resource constraint, and inexperience) to international expansion. This view is also supported by Buckley et al. (2007) and Kalotay & Sulstarove (2010) that EMNEs often required the availability resources, and competitive advantage over host countries. For instance, Luo et al., (2010) and Wu & Chen (2014) point out OFDI from EMNEs like Brazil, Russia, India and China (BRIC) encourage the local firms to show the potential of international competitiveness and enable them to "better compete against their much more experienced counterparts from advanced economies". Following a sample of listed Chinese firms (Wu & Chen, 2014) provide the insider information e.g. government regulations, policies, and emerging public policy issues, and improve the legitimacy of firms.

Other studies reveal that government supporting in a weakness of political, and limited property rights. Jormanaen & Koveshnikov (2012) found the main problem in less developed countries (LDC) e.g. intervention of local government, lack of legal protection for property rights, poor enforcement of commercial lass, less freedom, threats to managerial autonomy, non-transparent judicial and litigation system. There are as important

variable factors for EMNEs' motivation and internationalization process. Although, the study of Wu & Chen (2014) presented the Chinese government aims to support Chinese companies to go "global" (Wu & Chen, 2014).

Table 1. Topics on EMNEs

Article title	Research issues	Number	Percentage
Internationalization strategy	How internationalization in EM's firm integrated with local or acquisition.	9	60%
Institution and government supporting	Business-supporting with institutional government (Home/host country) in EMNEs' factors.	6	40%

Conclusion and future research directions

To conclude, the research would like to emphasize that the international expansion of EMNEs is very interesting phenomenon, which has scholars' attraction to more important continue to develop. The researcher provides the unique opportunity to study it real time, thus the research has chosen IM journal through 9 journals in the field of international business and management published over the past thirteen years. According to Jormainenn and Koveshnikov (2012) suggested that there is needed to fruitful approach that potentially may laed to a new theory development in the future and there is also further research verify the existing theoretical approaches. Although, this intensified research interest, the research realized that the development of theory should be revealed, and more empirical analysis that using a large of population of firms, and case studies. To this end, the future of international expansion of EMNEs is potentially significant and full opportunity for academics.

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The Effects of Marketing Mix on Social Commerce Store Brand Loyalty:

A Case Study of Social Commerce in Thailand

Assistant Professor Dr. Ravipa Akrajindanon

Dean, School of Business, Sripatum University

Email: Ravipa.ak@spu.ac.th

Assistant Professor Dr. Anupong Avirutha

Head of Digital Business Management Department

School of Business, Sripatum University

Email: anupong.av@spu.ac.th

Monton Tongpanung

Lecturer, School of Business, Sripatum University

Email: monton.to@spu.ac.th

Hatairat Bandittayara

Lecturer, School of Business, Sripatum University

Abstract

This study attempts to study the effects of marketing mix on social commerce store brand loyalty in Thailand. A total of 250 usable samplings of social shopping customers are obtained. The findings reveal that the predictor variables of product ($\beta = 0.478$, $t = 4.658$, $P = 0.000$), price ($\beta = 0.484$, $t = 4.787$, $P = 0.000$), place ($\beta = 0.476$, $t = 4.372$, $P = 0.000$), are achieved significance at the 0.05 level, and promotion ($\beta = 0.423$, $t = 4.576$, $P = 0.000$) reach the 0.05 significant level. the regression equation for predicting the dependent variable from the independent variable is Social Commerce Store Brand Loyalty = $2.731 + 0.228$ (Product) + 0.281 (Price) + 0.273 (Place) + 0.246 (Promotion)

Keywords: Marketing Mix, Social Commerce, Online Shopping, Store Brand Loyalty

Introduction

Electronic commerce (e-commerce) in Thailand is one of the largest growth in Southeast Asia countries (Potkin, 2016). The value of the e-commerce market was 2.56 trillion baht in 2016, a 14.03 percent raise from 2015, reported the Electronic Transactions Development Agency (EcommerceIQ, 2016). Currently, Thailand's e-commerce market had a total of \$2.9 billion worth of trade and has been growing at an average of 14.5% annually. By 2022, sales in the market is expected to reach \$5.8 billion and in 2025, \$11.1 billion (Yongjiranon, 2018). Currently the biggest e-commerce business is technology and media, which is worth \$1.2 billion.

Thai consumers have changed the way of shopping since e-commerce is becoming a major part of the shopping in Thailand. Especially, social commerce (s-commerce) offers a whole new world of opportunities and standards to business to consumer (B2C), and consumer to consumer (C2C) model. Furthermore, since s-commerce offers real convenience to merchants and businesses to create the store on the internet, they do not need to build or have a specific knowledge regarding create a website such as website coding, computer language, and graphic design. There are much easier to create a website at the present such as template websites, social media platforms – Facebook, Instagram, Line store, and so forth. Additionally, there is two-way and real-time information about the products being presented to consumers on social commerce platforms or application on mobile phone, it is a much broader assortment than any store could offer, even regular e-commerce. However, the general key to growing one of the top online marketplaces is: high-quality vendors draw in more customers, while a growing client base attracts more vendors. Thus, to track consumer patterns will involve more than focusing on the official retail sales and revenue; therefore, this study attempts to study the brand loyalty of online customers on s-commerce in Thailand.

Social Commerce

A new type of online shopping community integrates online activities including online social media and online shopping is becoming a new way of the shopping, since social media has increasingly become a constant in daily basis. As social media penetrates consumers' daily life, before they make any purchase, they are increasingly reaching out to their social media communities for opinions and reviews (Drell, 2011). The crucial difference between s-commerce and e-commerce is that s-commerce provides customers with the means to virtually interact with one another in order to make better purchase decisions. Along with that, s-commerce is the intriguing offspring of social networking and online shopping, and it can offer the growing business and building buzz that leads to sales, which the accessible form of word-of-mouth marketing offers a wealth of opportunities that they can focus and set the customer target group for businesses within limited budgets.

Typically, social commerce is the combination of social media platform and e-commerce (electronic commerce). Social commerce describes the convergence of social networks and e-commerce as social media is

becoming increasingly more influential on consumers' purchasing decisions. Social commerce is interdependencies in which consumers' choices influence others' choices in a direct and meaningful way. Social commerce integrates social media platform such as product sharing into the shopping experience. Social commerce started with a brand having a Facebook page, Twitter handle, Pinterest, Instagram and Line Store using sharing buttons on their retail website. The penetration of e-commerce including social commerce in Southeast Asia compared to the traditionally retail market is between 1-3 per cent, while in mature market like the US, China, Japan, Germany, and European countries, e-commerce markets are double digital penetration (Pornwasin, 2016). In Thailand, e-commerce market is estimated reaching 2.8 trillion bath by the year of 2017, which gains of almost 10 per cent from 2016 (Boonnoon, 2017). A crucial factor leading the growth in e-commerce is the support from the government sector, with promotions targeting small and medium-sized businesses (SMBs). However, e-commerce market is very hypercompetitive.

Social commerce enabling tools of OMNI-channel retailers, taking advantage of social networking features and strongly pushing the social aspect of their services to potential customers. Essentially, social commerce has provided opportunities to individuals to become entrepreneurs without the risk of traditional retail models. In Thailand, consumers who place orders through social media make up 51% of all online shoppers in Thailand, while the ratio is well above the world average of 16% and also significantly higher than the 32% for India, 31% for Malaysia and 27% for China (Ono, 2018). In 2007, social commerce sales in Thailand amounted to 137 billion baht (\$4.14 billion), making up about 20% of total e-commerce transactions (Ono, 2018). Therefore, social commerce is driven by social media giants Facebook, Instagram, Line, and Twitter. Many online shops now depend on these platforms by posting photos and details of products and accepting orders through inboxes. This new way of doing business is so popular it has taken up 50% of social commerce purchases (Yongjiranon, 2018).

Online Shopping Behaviors

The concept of involvement has yielded rich results for retail marketing strategy. The influence of product involvement prompts various research questions because the consumers' level of product involvement influences information searching behaviors and the purchasing decision process. In online retailing contexts, consumers will only be able to physically inspect a product after a purchase. In order to obtain additional information, consumers may rely on others' purchases as a screening device (Rabinovich 2007). Online shoppers are more likely to search for product information. According to Rigby (2011), the information search on the Internet is the most important predictor of online shopping behavior. Online consumers are spending time to get product information before they made a purchasing decision (Ward & Lee, 2000). Typically, with online shopping, consumers think that attractive factors are comparing price and wider choices. In a current study, consumers compared the price and brand of products through

the different websites (Ray, 2007). Moreover, Donthu and Gracia (1999) find that online shoppers are economic shoppers, which are price and quality concerned, because they are usually looking for inexpensive products with excellent quality, and they are sensitive to the price of the product. Online shoppers tend to be influenced through certain channels over time among members of a social system (Rogers 1995). Consumers are likely to rely on robust content, such as ratings, reviews, and recommendations. Moreover, when consumers pay attention to others reviews and recommendations, learning takes place, which may become valuable and helpful in their decision making.

Marketing Mix

Marketing Mix variables are the drivers of the revenue stream. Kotler (2005) states that the 4Ps model still provides a valuable framework for marketing planning. The main point beside selling and generating the revenue is that specific elements contained in the marketing mix should deliver more value, build a long-term and mutually profitability relationship with customers. McCarthy (1971) introduced the number of elements in the marketing mix to four basic ones and defines marketing mix as mix of four marketing variables (4Ps), namely, product, price, place, and promotion. Product considers both tangible (goods) and intangible (services) products which include services quality, service facilities, branding, packaging, standardization and grading. Price decisions affect both a firm's sales and profits, so price is always a consideration. Price is defined as any transaction in our modern economy can be thought of as an exchange of money-the money being the price-for something. The function of place is to match supply capabilities to the demands of the many target markets, moving goods wherever they are needed, including the factors that go into providing the time, and place, and possession utilities needed to satisfy target customers. Promotion considers that is communication between seller and buyer, including advertising, personal selling, sales promotion, tools of publicity, public relations, and various other forms of promotion. Promotion is vital, but not the only element of marketing strategy.

Consumers' Experience and Brand Loyalty

Social commerce value is the classical value creating and sharing platform; customer is the core of value creating and sharing, experience value. The influence of consumer experience to online social community is reflected that the perceived value of customer in virtual community has positive influence to community loyalty (Wang, 2011). To create and share value experience and perceiving in online social community influence to consumers' loyalty to the brands of social commerce, including sellers' account, sellers' Facebook page, Instagram, and others. The social commerce brand features in the themes of sellers' reputation, content, review and trust which have become the criteria to build consumers' experience to brand loyalty (Kim et al., 2014). Positive content, reputation, trust, and review

experiences drive brand loyalty (Huan, 2015). Thus, online social community is influencing more and more customer brand attitudes, it is efficiency to influence customer's attitude and behavior to brand by promoting brand and products in the platform. Kim et al. (2004) studied at an internet store for researching the customer loyalty, which shows that the customer who has higher position in community can organize activities in the platform, becoming the users who have deep loyalty to the community which transfer to brand loyalty. This kind of higher community recognition and community loyalty means that the community user keep same value with community value (Won et al., 2011), which transfer to the emotion and recognition of the brand loyalty of the social commerce. Consequently, repurchase intention is the likelihood that a customer will continually buy a particular product/service once they have a good experience to the social commerce store/brand. The repurchase intention typically comes from a particular brand, product or service requires assessment of all brands, products or services offered by competitors (Dodds, Monroe, & Grewal, 1991).

Hypothesis

H1. Marketing mix factors are positively related to store brand loyalty

H 1.1 Product has positive and significant impact on store brand loyalty

H 1.2 Price has positive and significant impact on store brand loyalty

H 1.3 Place has positive and significant impact on store brand loyalty

H 1.4 Promotion has positive and significant impact on store brand loyalty

Research Methodology

The research design is drawn from quantitative research methodology. The survey is used to establish a baseline on the relationship between marketing mix and brand loyalty intention of Thai consumers on social commerce store in Thailand. The total sample for this study consists of 250 samplings by using the convenience sampling method. Descriptive, frequency, percentage distributions, means are used to describe and report the information collected affecting to individual variables and demographic information. Furthermore, the data obtained is analyzed by Stepwise Multiple Regression.

Results

A total of 250 usable questionnaires are obtained. The results show the distribution of usable responses by gender; consist of 99 males (39.6%), and 151 females (60.4%). The respondent response by age; 9.6.5% report their age less than 20; 43.2 report their age to be between 20 and 25; 8.8% report their age to be between 31 and 35; 14.8%

report their age to be between 36 and 40; 13.2% report their age to be over 40. The respondents report by their highest educational level; 5.6% report their high school is their highest educational level; 7.2% report their college is their highest educational level; 56.8% report their bachelor degree is their highest educational level; and 30.4% report their master degree or higher is their highest educational level. The respondents report their marriage status, 68.8% report that they are single, while 31.2% are married. The respondents report by their income; 25.2% report that their income per month are less than 15,000 baht; 30% report their income per month are between 15,000 – 20,000 baht; 14% report that their income per month are between 20,001 – 30,000 baht; 12.8% report that their income per month are between 30,001 – 40,000 baht; and 18% report that that their income per month are over 40,000 baht.

The results show the average spending for social shopping each time that the respondents spend each times on social commerce store. 30.0% report that they spend less than 500 baht each times for social commerce store; 26% report that they spend 501-1,000 baht each times for social commerce store; 28.4% report that they spend 1,001-2,000 baht each times for social commerce store; 8.8% report that they spend 2,001-3,000 baht each times for social commerce store; and 6.8% report that they spend over 3,000 baht each times for social commerce store. The table 2 also shows the frequency social commerce store. 4.8% have social shopping frequency once in three to six months; 17.2% have social commerce store frequency once in three months; 21.2% have social commerce store frequency once a month; 44.8% have social commerce store frequency more than once in a month; 8.8% have social commerce store frequency every day; and 3.2% have social commerce store frequency more than once a day. Approximately twenty-one percent of consumers have shopped social commerce store for digital content / game / application (34.8%), followed by apparel and accessories (17.6%), cosmetic (13.6%), consumer electronic / appliance (12.8%), food and household (10.8%), and computer and gadget (10.4%).

Most of respondents have visited and repurchased merchandizes from same social commerce store (66.8%). Respondents considered to react to the social commerce store by giving Like to the social commerce store (34.8%), followed by sharing the post or product to others (27.6), and providing recommendation or comments (18.4%), while 19.2% have no action or response to the social commerce store.

The respondents are asked their opinion regarding product factor in marketing mix element that they have experienced in the social commerce store. The most frequency endorsed responses is photo and content on are unique design (mean = 4.06), followed by product brands are well known (mean = 4.02), good packaging and visual appearance (mean = 4.01), variety of products are available to choose (mean = 3.77), and products are returnable and refundable (mean = 3.51).

The respondents are asked their opinion regarding price factor in marketing mix element that they have experienced in the social commerce store. The most frequency endorsed responses is product's price is cheaper than

offline store (mean = 4.22), followed by product's price is cheaper than other online store (mean = 4.10), product's price is included free shipping (mean = 3.91), cash on delivery is available (mean = 3.84), and varieties of payment methods are available (mean = 3.79).

The respondents are asked their opinion regarding place factor in marketing mix element that they have experienced in the social commerce store. The most frequency endorsed responses is social commerce store is frequency update (mean = 4.16), followed by social commerce store is easy to be founded / searched (mean = 4.02), providing clear and detailed delivery schedule (mean = 3.91), products on social commerce store is easy to find (mean = 3.88), and providing the tracking system to track the order status (mean = 3.73).

The respondents are asked their opinion regarding promotion factor in marketing mix element that they have experienced in the social commerce store. The most frequency endorsed responses is providing an extra discount / negotiation price (mean = 4.18), followed by having notifications alert for new promotion (mean = 3.92), having live on product review (mean = 3.97), having the channels to communicate (mean = 3.89), and having rewards points programs (mean = 3.89).

The respondents are asked their opinion regarding the social commerce store brand loyalty. The most frequency endorsed responses is I will try to buy a merchandize from this social commerce store again (mean = 4.15), followed by I would recommend this social commerce store to my friends for purchasing (mean = 4.14), this social commerce store is my favorite online shopping (mean = 4.01), and this social commerce store is my first choice to buy through online channel (mean = 3.97).

Table 1 shows the significance of each coefficient for each independent variable. It reveals that the predictor variables of product ($\beta = 0.478$, $t = 4.658$, $P = 0.000$), price ($\beta = 0.484$, $t = 4.787$, $P = 0.000$), place ($\beta = 0.476$, $t = 4.372$, $P = 0.000$), are achieved significance at the 0.05 level, and promotion ($\beta = 0.423$, $t = 4.576$, $P = 0.000$) reach the 0.05 significant level. Therefore, the regression equation for predicting the dependent variable from the independent variable is

$$\text{Social Commerce Store Brand Loyalty} = 2.731 + 0.228 (\text{Product}) + 0.281 (\text{Price}) + 0.273 (\text{Place}) + 0.246 (\text{Promotion})$$

Table 1 The Influences of Marketing Mix to Social Commerce Store Brand Loyalty

The Relationship between Marketing Mix and Repurchase Intention	Regression Coefficient (b)	Standardized Coefficient (β)	t	P
Product	0.228	0.478	4.658	0.000*
Price	0.281	0.484	4.787	0.000*
Place	0.273	0.476	4.372	0.000*
Promotion	0.246	0.423	4.576	0.000*
Constant (a)	2.731		9.571	0.000*
R = 0.814, R² = 0.663, SEE = 0.477, F = 49.441, P = 0.000*				

*P < 0.01

Discussions and Recommendations

According to the finding, customers are having social commerce store brand loyalty once they can find the social commerce store and products inside the store that they are looking for; therefore, social commerce store providers should pay close attention on the developing the page and design that help consumer easy to navigate, which is significantly important to consider design elements as tools to guide the user into the shopping experience and make customer feel good not confused (Gutierrez, 2016). Furthermore, Morganosky and Cude (2000) pointed out that to increase the rate of visiting the store the design is one way to enhance customer value, such as improving time efficiency, easy access, portability, applicability, ingenuous flexibility, and avoidance of unpleasantness. According to Pogorelova et.al (2016), in the digital environment it is replaced by technology, which is implemented in the business virtual store of the interface and by aligned service business processes. Furthermore, pricing also has been using for creating marketing strategies in decades. According to Shankar, Rangaswamy, and Pusateri (1999), they found that price is important and influence purchase decision. Yulisetiari, Subagio, Paramu, and Irawan (2017) also found that price in online shop was very affordable and customers tended to come back to purchase again. Beside pricing strategies, the possibilities of social networks are widely used in order to increase the customer loyalty, to motivate them to participate in the actions of sales promotion, to disseminate the marketing information among their friends and acquaintances (Pogorelova et.al, 2016). Therefore, the recommendations are suggested as the followings:

1. Social commerce sellers need to meet customers' requirements in order to gain high relational trust from customers, reduce transaction risk, and improve convenience of shopping by establishing a unique store design and easy to access, navigate and find products.

2. Social commerce sellers should satisfy customers' shopping motives (needs), enhance their community bond (identification) and buying experience (convenience) by providing two way communication combining an effective pull and push communication modes of social interaction, including chatting and calling rather than posting and comments in order to remain on customer support services, especially first and foremost on the shopping experience
3. Social commerce sellers should offer competitive price, convenience, rich product information, and social interaction to foster customer value by encouraging their customers to provide constructive feedback regarding product, service, and so forth, to get extra discount for further purchase.
4. Promotion includes call to action, e-mail marketing, notifications, personalized marketing should be widely used in order to increase the customer loyalty, to motivate them to participate in the actions of sales promotion, to disseminate the marketing information among their friends and acquaintances.

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Identity variation to class and gender on ‘Legally Blonde’ film

Sirikanlaya Sakhet

College of Tourism and Hospitality

E-mail: Sirikanlaya.sa@spu.ac.th

Pan Parnmarerng

College of Tourism and Hospitality

E-mail: pan.pa@spu.ac.th

ABSTRACT

Breaking up with her boyfriend is the inspiration of Elle, an exceptional blonde girl in ‘Legally Blonde’ film released in 2001, to entrance Harvard Law School. The distinct character of Elle impacts on her identity to others. This study aims to insight understand the effects of identity variation to class and gender. The excerptions of conversations between Elle and others were analysed in this present study. In this study, the theories related to class, gender, identity and ideology were used to investigate the cases. As the result of the study, the identity can be constructed by individuals and also reflected by others differently depending on various context and language use.

KEYWORDS: class/ gender/ feminism/ Legally Blonde/ identity/ language use/ linguistic

1. Introduction

The identity of a perfect wife has been set by social ideology, considering the pressure on women to be perfect wives and mothers while they are still pursuing lives and careers beyond those roles (and they are also expected to look pretty). The expectations placed on women in the workplace to be assertive but not bossy, polite but not deferent, presentable but not overdressed - feminine.

“Legally Blondes”, a lady (Elle) with pink costumes and naturally blonde. The reasons why she was broken up by her boyfriend (Warner) are that she is "too blonde" and she is not "serious" enough for his future political career. Elle, with her ambition, tries to prove herself and to complete what Warner would like his wife to be or as his role model by attending Harvard Law School and she achieved this, though. After a while Elle surprisingly becomes one of the best students in class and being one of the four coveted students who has internship at their professor’s company. Elle is the assistant in a sensational murder trial defense and she wins the case. She defeats her reputation of the "dumb blonde" and she can change stereotype to expose

herself ultimately and proudly as Legally Blonde. The purpose of this study is to insight understand the effects of identity variation to class and gender.

The character of Elle performs as feminine, how she dress, speak and behave – “identity may be in part intentional, in part habitual and less than fully conscious” (Bucholz, 2005). At the end of the film, Elle proves that she is able to be brainy as well as feminine. As a result, ‘Legally Blonde’ is a story about class conflict and gender bias.

2. Research Objective

- (1) what is the identity performed by Elle Woods?
- (2) what is the identity of the society imposed on Elle?

3. Research Framework

3.1 Media: film and Ideology as identity reflection

According to the film, Elle attempts to prove her capability to reveal her other identities because she is seen as a blonde girl which is the identity that is reflected by others. Identities may be linguistically indexed through labels, implicatures, stances, styles, or linguistic structures and systems” (Bucholz, 2005). It tends to believe that “Identities are relationally constructed through several, often overlapping, aspects of the relationship between self and other, including similarity/ difference, genuineness/artifice and authority/ delegitimacy” (Bucholz, 2005). The stereotype of the heroine is judged by the society. Ideologies belong to each person and ideology will exist in the group level (Mooney, 2004).

As a blonde girl, Elle’s identity is reflected unconsciously by social ideology. The particular interests can be found in the ideologies; it leads to appear to all universe interests which are shared by the groups as the whole, so a group’s ideology will be unmarked for that group (Mooney, 2004). Therefore, ideology is created by groups and persons. The individual or group is rarely recognized by people as influence empower by ones’ behavior (Mooney, 2004).

Chomsky and Herman argue that the mass media sustained representations construct ‘common sense’ and the product of the filters is these representations which are identified (Mooney, 2004). Therefore, entertainment is valuable and addicted for dimming the sensibilities of a propaganda-conscious in mind. It makes us recognise that ideologies are able to be communicated in any media variations (Mooney,2004). The representations of film can powerfully influence and present the way in which they complete their power of representation that is seriously complex (Tasker, 2002).

Supporting by Chomsky and Herman, they argue that the news media works as if they are propaganda. Moreover, Hall (1982) notices that main ideology of institutions or media provide to sustain the dominant social order. It is not simply to reflect or express meaning that is already existed. It is conducted within a political context

which made effective and active by a “common-sense” or ideology. Media can disseminate but they do not face serious opposition or reservations (Said, 1981).

Films are as cultural products, they also represent as social constructions they composed symbols, images, and the other forms of consciousness which embody beliefs, idioms, values, and stereotypes. Seeing that mass media is the intermediation to prevail social ideology, it leads to construct person identity. Although the identity can be constructed by others, most researches related to identity have focused on practitioners’ identities more than publics’ identities. The notion of identity can be used in the entire universe context of living things and substances including humans. Thus, in terms of language, social situations of users at the same time actively construct and display their roles and identities (Van Dijk, 1997).

3.2 Being stereotyped by others: class and gender

As a result of the ideology, the roles of gender and identity are sensitively identified by the individual and cultural ideology. According to the identification, a cultural analysis can pursue the meaning of dominant social relations and the active and formative process is not only ways in social relation, but transformational process can be also applied (Hall, 1982).

The views of gender in mass media present that pop-feminism can indicate the changes in the representation of women and in the media dealing with the patriarchal family system. Many scholars say that it is based on gender discrimination, the feminism in popular forms do not really support changes in the present social order, it is supposed to enter the mainstream and feminism and can be appropriated in the dominant ideology (Hollows 2000).

Functional approach states that gender is intrinsic of individual. Thus, gender can be seen as an independent variable. In stylistic approach, sex differences describe gender as a role which is the social structure in individual position and it is also the expectation within that position. Therefore, it is difficult to see the distinctive domains of people life because of the individual characteristic (Van Dijk, 2007).

For class, it intersects with other categories of identity like gender, race and sexuality (Huppertz, 2016). People attempt to defend themselves against from depressing and stigmatizing by external gazes and they try to produce positive value by refusing, avoiding and escaping to keep in better class. (Skeggs, 2004). Individuals’ wealth can be considered as one of the factors that contribute to the perception of ‘class’, however, there are also some other factors for example; education, language that a person speaks, these play an important role in the perception of social class (Mooney, 2004).

3.3 Related previous studies

According to the related journal from Sumi Kim, Feminist Discourse and the Hegemonic Role of Mass Media which are The Woman Next door and Lovers film. Newspaper contents play a role significantly into the liberty of sexuality of the actress and those acknowledged some changes of gender roles in the recent trend of social culture. The purpose of the study is to address widely about the role of media within ideology which is

dominant in South Korea in the incorporation of feminist discourse. Both stories present the way of the gender roles in dominant ideologies of tradition seen as “female sexuality and the capitalist patriarchal family system”, *Lovers* and *The Woman Next Door* are the two popular feminist culture texts in South Korea and also seen as different social groups in different events. Therefore, for better understanding the study has applied the theory of hegemony, the relationship of culture and communication are examined. In the methodology, it analyzes the newspaper articles that are expected to insight into the media roles in social meaning construction. The data were selected from ten nationally circulating newspapers. In some respect of the findings, *Lovers* and *The Woman Next Door* challenge the dominant ideologies by representing female liberty and reversing gender roles involved in a topic of extramarital affairs that goes against the value of the nuclear family model nowadays.

The Research also highlighted discourses about feminism in South Korea and specific socio-economic contexts. Even if media texts can adjust and reflect social changes, it seems to have the hegemonic ideology of patriarchal.

Secondly in the research of Furia and Bielby, *Bombshells on Film: Women, Military Films, and Hegemonic Gender Ideologies*. The story shows the ideas accordance with the institution’s gendered culture in organization. The analysis of the research title: *Bombshells on Film: Women, Military Films, and Hegemonic Gender Ideologies* is about the military presents the influence on gendered institutions both logics and practices. Woman’s images present masculinity in the military’s culture. The study is to examine the way that military films can display the socially constructed gendered binary in the concept of the military as hegemonically masculine through the images, scenes, characters, dialog and narrative. The data are collected from men who talked of women and the way they speak of women. Those topics are referred to lovers, sex object, family, co-workers, or friends. Feminine ideology is occurred in negative manners. As a result, gender constructions can symbolize within film military narratives. It is the resolution of institutions to see the appropriated gender perception that reveals how symbolic pictures of women, men, and gender are completed in the scene to confirm that the military’s preferred hegemonic masculine culture.

4. Research Methodology

4.1 Research Design

This study adopted as the approach of a social- constructionist to examine the language which reflects to identity, ideology, class and gender of the main character, Elle in ‘*Legally Blonde*’ released in 2001 and the length of the film is 96 minutes.

4.2 Population and Sample

The study aims primarily to investigate the linguistic behaviour of main character, Elle, her boyfriend and other surrounding people to explore the relationship between genders, professional communication and the law school culture.

4.3 Variable

The variables are the differences of language used among the characters which take place in education class.

4.4 Research Instrument

The study uses authentic spoken data from the scenes.

4.5 Data Collection

The collected data were selected from six excerpts from the movie's transcription. The six excerpts are from the scene that Elle was having dinner with her Ex-boyfriends, Warner, in this scene the analysis of gender identity and ideology will be complied. Second scene selection is when Elle introduced herself on her first engages to the institution together with the third and the fifth scene that show the situation when Elle was asking to join the group work and when a professor Elspeth was addressing in class; these three scenes can support each other about the relationship between Elle and others, particularly her classmates. The forth excerpt is the moment that Professor Donovan was doing his lecture, and the last excerpt presents the way Elle answered the question from Professor Donovan, both scene can help to investigate how the language change Elle's identity to be another.

4.6 Data Analysis

According to the scene, women have been socially expected to be less intelligent than men. Man has to find his appropriate wife, particularly in high society level. The identity performed should be matched to each other, wife and husband. Therefore, the story can reflect gender ideology which has been stereotyped by the characters. And the identity as a blonde girl may reflect Elle's character by other perceptions. Consequently, this study will analyse the scene and the language use which related those of identity performance; the identity performed by Elle Woods and the identity of the society that impose on her.

5. Research Findings

5.1 The reflection of gender ideology

In the first excerpt, gender hegemony is another factor to create individuals' ideology. The identity of Elle as a blonde girl is not able to be accepted in Warner's, her ex-boyfriend's, society. Warner's ideology to Elle can be lexically seen from the first excerpt. Consequently, According to the identification, a cultural analysis can pursue the meaning of dominant social relations; "it is not only in their active and formative process, but it is also in their transformational process" (Hall,1982). Gender is presented and affected by the ideologies and contexts related the history including society and culture. As the result of the transcription, the data are related to the finding of one case study, Bombshells on Film: Women, Military Films, and Hegemonic Gender Ideologies, which show the talk of men to women and the way they spoke of women. They are observed many of times until

they found that those topics are referred to lovers, sex object, family, co-workers, or friends as feminine ideology in negative manners (Furia & Bielby, 2009).

5.2 Class and identity reflected by others' ideology

Second excerpt shows that Elle was not only stereotyped by her ex-boyfriend, but when Elle entered to Harvard Law school she was also disparaged by others. Thus, class and identity can be differentiated by others' ideology. Elle was disparaged by her education or her profile. Mooney (2004) states that "personal wealth can still be considered one of the factors that contribute to the perception of 'class', other factors such as education, language a person speaks play an important role in the perception of social class. Therefore, societies presented as lacking social class distinctions, it can still be found. Then asked informants to listen to the voices and rate their intelligence, education, socio-economic status, reliability, friendliness, sense of humour and so on" (p.179). As a result, being seen as a blonde girl, Elle was ignored and biased by others including professor.

In the third excerpt, Professor Elspeth Stromwell, a tough-as-nails Grande Dame in her 50's, addresses the class. Elle was rejected to attend the class because of her none preparation (No one to give any advice to her). Elle is as a black sheep. To support the situation than Elle was ignored by others, it can be seen in the excerpt 5 which presents that nobody accepts Elle as a member to their group. People attempt to defend themselves against from depressing and stigmatizing by external gazes and they try to produce positive value by refusing, avoiding and escaping to keep in better class (Skeggs, 2004). Finally, her identity has been changed by her language use. As Professor Elspeth Stromwell said that "*A legal education means you will learn to speak in a new language*". In terms of language, social situations of users at the same time actively construct and display their roles and identities (Van Dijk, 1997). Comparing to the language use of Elle in the beginning and the almost in the last scene (excerpt 4 and 6), it is to see the language change that reflects her different identities.

Therefore, in the excerpt 4 and 6 indicate that Elle speaks differently, the way Elle speaks can also display her performance and identity differently. Talking with critical thoughts and ideas encourages Elle to get acceptance from others. Individuals' wealth can be considered as one of the factors that contribute to the perception of 'class', however, there are also some other factors for example; education, language that a person speaks, these play an important role in the perception of social class (Mooney, 2004).

6. Discussion

The different identities of the major character, Elle, are shifted depending on the purpose of her. The way she adjusts herself to be a part of the community is the way that she is trying to change her speaking approach. The first analysis from the first excerpt shows that Elle was reflected her identity by Warner's or her ex-boyfriend's ideology as she is not serious one. Moreover, in the second, third and fifth excerpt present how others, her classmates, stereotype her as an out group or other classes who is strange and unintelligent. And in the fourth and the last scene reveal the way she changes speaking style in class, this displays the influence of language use

reflecting on her identity. It can conclude that the identity can be constructed by individuals and also reflected by others.

7. Suggestion

The limitation of this study is that it is difficult to investigate all behaviour in details, all we are able to observe is only the factors presented in the film; there may be other variables relate to identity changes. This study may contribute to further studies which is relevant to gender and class identity and ideology and may apply to classroom pedagogy related to personality, identity, class and genders.

8. Acknowledgement

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**Influences of Trust and Work Values towards the Relationships Transferred between
Psychological Capital and the Employees' Performance of
Small Enterprises in Thai Ceramic Industries**

Dr. Thanyanan Boonyoo

Lecturer, Doctor of Business Administration Program, Southeast Asia University

E-mail: thanyanan7@gmail.com

Dr. Pharin Thanonthaweekul

Physicians, Specialist of Family Medical, Pharin Clinic Acupuncture, Anti-Aging

E-mail: pharin2010@hotmail.com

Kanokorn Boonmakerd

Operating personnel officers, Faculty of Business Administration, Ramkhamhaeng University

E-mail: boonmakerd@hotmail.com

ABSTRACT

This study aimed to explore: (1) psychological capital, trust, work values, and employees' performance; (2) trust as the mediator variable in correlated with psychological capital towards the employees' performance; and (3) work values as the moderator variable in correlated with psychological capital towards the employees' performance of small enterprise employees in Thai Ceramic Industries. This exploratory quantitative study was implemented with 100 employees' small enterprise in Thai Ceramic Industries. Questionnaires were implemented and statistically analyzed using percentage, means, and standard deviation (SD), and structural equation analysis. The results of the study revealed that: (1) psychological capital, trust, work values, and employee performance were overwhelmingly averaged at high level; (2) the trust as the mediator variable correlated with psychological capital towards the employee performance; and (3) the work values as the moderator variable correlated with psychological capital towards the employee performance as well. This study found that, trust and work values are key factors to creating and improving the continuously increasing of employee's performance.

KEYWORDS: psychological capital, trust, work values, employee performance

1. Introduction

Nowadays, economic structure societal politics and technology are regarded as the external environment has tremendously changed. Private sectors have complicatedly challenged with those continuous changes in the system. Adapting to those challenges are significant factors that causes the direct effect of their employees' performance. Creativity has been a widely adapted guideline to continuously encourage company's development of employees' performance management (Nemati, 2015, p. 733; Grusec, 1992 p. 776))

Employees' performance is a crucial factor influencing the company's achievement. The employees have impact on company's objectives and the employees' performance depends upon the expectation and their eagerness to perform desirable behaviors in enhancing the positive psychological capitals, which is followed by the creativity of individual. It is regarded as the unique identity to acknowledge the correlation among each factor to contribute the trust within the organization (Mohammadpour et al., 2017, p. 495; Nafei, 2015, p. 250). Furthermore, the desirable characteristics of confidence and attitudes within the organization relied on appropriate relationship among organization members and their conformation followed by the company regulations (Usikalu, Ogunleye & Effiong, 2015, p. 8). These could contribute the work values in response to employees' concern in their common duties and could contribute their long-run duty achievement (Ho et al., 2012, pp. 64-65).

Thai Ceramic Industries is a human reliant industry which means employees are significant factor in production and are associated with the local production of the highlighted unique products by combining several local cultures. However, they have struggled with professional employees who are specializing in design and contributing artworks causing them not to add value to the products. Additionally, the quality of raw materials is still not constant. Especially in SME organizations, they lack of the effective capability in contributing the employee performance to retain the product quality, causing them not to compete with other foreign rivals (Smuththarak, 2014, p. 1).

Based on the aforementioned information, the researcher would like to explore the trust and work values in transferring the relationship between psychological capital and employees' performance of enterprise employees in Thai Ceramic Industries. This study aims to investigate the causes or factors affecting employee performance as a guideline to organize the effectiveness of employee' performance among the world of competitions.

2. Research Objectives

(1) To explore psychological capital, trust, work values, and employees' performance of small enterprise employees in Thai Ceramic Industries.

(2) To explore trust as the mediator variable in correlated with psychological capital towards the employees' performance of small enterprise employees in Thai Ceramic Industries.

(3) To explore work values as the moderator variable in correlated with psychological capital towards the employees' performance of small enterprise employees in Thai Ceramic Industries.

3. Review Literature

After reviewing the literary works, concepts, theories, and related research studies, the researcher has summarized as the following:

(1) Psychological Capital (PC)

Psychological capitals are positive psychological characteristics of the individual's confidence in developing the employee performance. It relies on the significant resources that are crucial foundation in contributing positive results to other resources (Tho, Phong & Quan, 2018, p. 125; Smith, Vogelgesang & Avey, 2009, p. 229). Nemati (2015, p. 733) identifies that the establishment of expectation is a positive motivation. This is when an individual psychological states is combined with positive feelings from human relationships, contributes to the organization trust and thus other colleagues or coworkers could further contribute positive employees' performance among the organizations (Mohammadpour et. al., 2017, p. 495).

(2) Trust (TR)

Trust is a significant social capital within an organizational system and it could reduce transaction cost. It relies on member relationships, appropriate facilities, and effective organizational regulations (Nemati, 2015, p. 734; Alawiyah & Held, 2015, p. 352)) in achieving their organizational goals. As Usikalu, Ogunleye & Effiong (2015, p. 8) stated if an organization could provide trust within their organization, its employees could perform their duties effectively. Additionally, top managers should establish positive psychological environment for their employees' satisfaction and activate creative policies to establish trustful environment within the organization and to continuously promote desirable employees' performance in response to the market demands (Nemati, 2015, p. 733).

(3) Work Values (WV)

Work values are attitudes of each employee towards responsibilities in their workplaces. It plays a crucial role in contributing emotional responses of their employees at work (Ho et al., 2012, pp. 64-65). In general, employee performance is regarded as dynamic personality traits, such as work engagement, organizational commitments, and professionalism in the workplace. These traits could contribute the differences of their employee performance (Ueda & Ohzono, 2012, p. 98). Kappagoda, Othman & Alwis (2014, p. 146) state that work values could involve attitude toward commitments of those employees, supporting the desirable behaviors within the organizations. Generally, the manager should emphasize the employees' satisfaction and team relationship. These two factors are parts of desirable attitudes at work and organization.

(4) Employee Performance (EP)

It consists of expected organizational behaviors or activities of the employee engagements virtually in contributing aim or objective outcomes (Guangyi & Shanshan, 2016, p. 75). All of these factors rely on knowledge, professional skills and experiences of each individual in establishing the organizational achievement (Boonyoo et al., 2016, p. 81). Furthermore, employees' performance outcomes can involve any informal activities or insignificances toward the organization achievements. However, these could also effectively assist in the establishment of the performance values as a part of resource management within the organizations and in enhancing the highest quality of employees' performance (Kappagoda, Othman & Alwis, 2014, p. 145; Salman et al., 2016, p. 138).

4. Research Framework

Based on the aforementioned literature review, the researcher has created the conceptual framework of this study as the following:

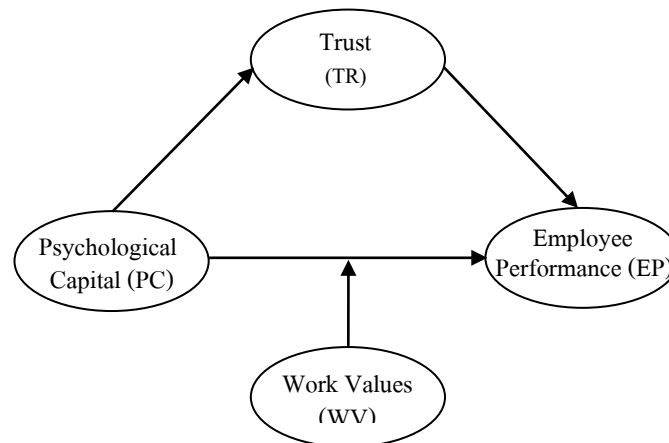


Figure 1 Research Framework

5. Research Hypotheses

Hypothesis (H1) Psychological capitals have impact directly on the trust.

Hypothesis (H2) Psychological capitals have impact directly on employees' performance.

Hypothesis (H3) Trust has impact directly on employees' performance.

Hypothesis (H4) Trust as the mediator variable correlated with the influences of psychological capitals and employees' performance.

Hypothesis (H5) Work values as the moderator variable correlated with the influences of psychological capitals and employees' performance.

6. Research Methodology

This quantitative study is an exploratory research implementing questionnaires. The researcher has followed the delimitation and descriptive details as follows:

6.1 Population and Sample

Participants in the study were 273 of small enterprise employees in Thai Ceramic Industries, which is registered with Department of Industrial Works (Department of Industrial Works, 2018), whereas those participants were randomized to 100 samples, using size measurements under the SEM analysis of structural equation model of Piriyaikul (2010), identifying sample sizes as follows:

$$\begin{array}{l} \text{If } \frac{\text{Numbers of variable equations}}{\text{Numbers of latent variable}} \leq 2 \text{ defines the sample size } (n) \geq 200 \\ \text{If } \frac{\text{Numbers of variable equations}}{\text{Numbers of latent variable}} > 3 \text{ defines the sample size } (n) \leq 100 \\ \text{In case } \frac{\text{Numbers of variable equations}}{\text{Numbers of latent variable}} = \frac{19}{4} = 4.75 \end{array}$$

This equation defines sample sizes as 100 samples by using stratified random sampling and simple random sampling.

6.2 Research Instrument

The research instrument is questionnaire which included personal information of the participants in the first section. The second to fifth sections are in the checklist pattern and investigate psychological capital, trust, work values, and employee performance. These sections consist of questionnaires by applying the 5 levels of Likert's Scale (Likert, 1932). The quality inspection of the tool. The researcher has conducted the reliability test to measure the internal consistency of the instruments by using Cronbach's Alpha Coefficient method. The coefficients of psychological capital, trust, work values, and employee performance were 0.825, 0.732, 0.814 and 0.853 respectively.

6.3 Data Collection

The questionnaires were distributed to 100 of small enterprise employee in Thai Ceramic Industries; were collected and achieved a 100% response.

6.4 Data Analysis

The researcher has explored the completion of questionnaires before analyzing the data by computing SPSS program and structural equation model. Then, to analyze the data, the researcher has implemented statistical analysis, including (1) descriptive statistics such as percentages, means, and standardized variations (SD) and (2) Structural Equation Modeling (SEM) by using PLS Graph 3.0 program (Chin, 2001).

7. Research Findings

(1) In terms of personal information section, it was found that the majority of the participants in this study are females (67%). The averaged age is 41 to 50 years (37%) with educational level lower than high school level (Grade 10) at 43%. Most of them have been working for 4 to 6 years at 37%.

(2) In the aspect of psychological capital, trust, work values, and employees' performance, the finding revealed that psychological levels were at the highest level ($\bar{X}=4.28$, $SD=0.533$), followed by employee performance ($\bar{X}=4.22$, $SD=0.543$), trust ($\bar{X}=4.12$, $SD=0.503$), and work values ($\bar{X}=3.83$, $SD=0.535$).

(3) In terms of Structural Equation Modeling (SEM), overall research findings in analyzing the relationships among the coefficient regression both in direct and indirect effects, influencing the employees' performance outcomes as shown in the figure 2:

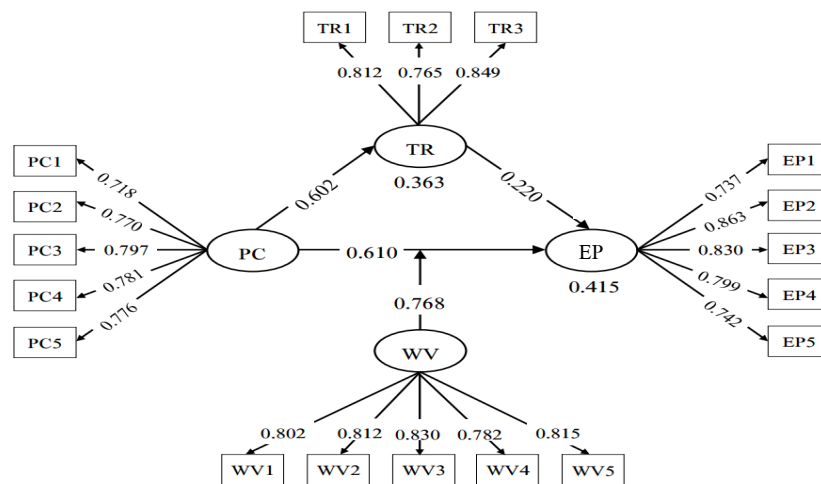


Figure 2 The baseline of structural equation modeling relationships

Figure 2 shows the baseline of Structural Equation Modeling relationships of structural factors affecting employees' performance. The research findings revealed that (1) psychological capitals have directly influenced their trust ($DE=0.602$), followed by the employees' performance ($DE=0.610$); meanwhile, they indirectly influenced employees' performance ($IE=0.132$); (2) Organizational trust has directly influenced the employees' performance ($DE=0.602$); and (3) Work Values are as moderator variable transferring the relationships among their psychological capitals and employees' performance of the regression coefficient level were at 0.768.

(4) In terms of Standard Equation Modeling hypothesis investigation, the research findings were shown effects on the small enterprise in Thai Ceramic Industrial employees' performance and the results were, by concluding in brief in Table 1:

Table 1 Results of testing hypotheses

Hypotheses	Coefficient (Coef.)	t-test	Results
H1 Psychological capitals have impact directly on the trust.	0.602***	8.119	supportive
H2 Psychological capitals have impact directly on employees' performance.	0.610***	2.853	supportive
H3 Trust has impact directly on employees' performance.	0.220***	2.118	supportive

Notes: (* refers to p-value ≤ 0.10 or $t \geq 1.65$) (** refers to p-value ≤ 0.05 or $t \geq 1.96$) (***) refers to p-value ≤ 0.01 or $t \geq 2.58$)

As shown in Table 1, the findings revealed that psychological capitals affecting directly their trust and employees' performance, whereas trust affected directly those employee performances.

(5) In terms of the influence of moderator variable and mediator variables as transforming variables of the relationship among independent variables and dependent variables as shown in Table 2.

Table 2 Results of indirect structural equation modeling affecting employees' performance

Hypotheses	Effect	Boot SE	Boot LLCI	Boot ULCI
H4 Trust as the mediator variable correlated with the influences of psychological capitals and employees' performance.	0.203	0.081	0.068	0.391
H5 Work values as the moderator variable correlated with the influences of psychological capitals and employees' performance.	0.133	0.049	0.045	0.240

Table 2 shows that (1) the trust is as a mediator variable between psychological capitals and employees' performance. Results of multiplication of lower class boundaries coefficient (Boot LLCI) were coded 0 (no protest condition). That is to say, trust is a mediator variable between psychological capitals and employees' performance. The multiplication of lower class boundaries coefficient (Boot ULCI) were at 0.068; whereas the upper class boundaries coefficient (Boot ULCL) of which was at 0.391 and (2) the work values is a moderator variable between psychological capitals and employees' performance. Consequently, the results of the multiplication of lower class boundaries coefficient (Boot LLCI) to upper class boundaries coefficient (Boot ULCL) were coded 0 (no protest condition). That is to say, the work values variable is as a moderator variable

between psychological capitals and employees' performance. The results of the lower class boundaries coefficient (Boot LLCI) were at 0.045 and their upper class boundaries coefficient (Boot ULCL) results were at 0.240.

8. Discussions

This study has classified the research findings into each factor as follows:

(1) In terms of psychological capitals, it was found that the psychological capital has influenced the trust and employees' performance. Likewise the results of Nemati's study (2015, p. 733), she stated that each individual's psychical capitals were correlated with the expected factor that contributes to the organizational trust so as to achieve the organizational employees' performance (Mohammadpour et al., 2017, p. 495).

(2) In terms of the trust, the research findings revealed that the trust has influenced the employees' performance and the trust as the mediator factor correlated psychological capitals and the employees' performance. As in Usikalu, Ogunleye & Effiong's study (2015, p. 8), they identified the establishment of trust within the organization can engage the organizational effectiveness and achievement. In this case, the manager can establish positive psychological capitals to enhance trust. This could create the performance creativity in response to the needs of the current market (Nemati, 2015, p. 733).

(3) In terms of work values, the research findings revealed that work values as the moderator factor correlated with the influence of psychological capitals to enhance the employee performance. In Kappagoda, Othman & Alwis' study (2014, p. 146), they stated that the work values as the supportive factor have engaged the desirable employees' organizational behavior. The manager must highlight the employees' desirable satisfaction at work and contribute to the organizational relationship. These two factors can also contribute the desirable attitudes at work.

9. Suggestions

From the research findings, the researchers would like to give some suggestions as follows:

9.1 Suggestions for Organizational Management Utilities

(1) The research findings showed that the psychological capitals are the mental states, causing improvement on the employees' performance. Thai Ceramic Industries need to mobilize the psychological capitals as a threshold to further increase the organizational values to those organizations.

(2) The research findings showed that the trust is a significant factor that increases the employees' performance. The entrepreneurs in Thai Ceramic industries need to improve infrastructure to encourage the relationship and the satisfaction which will eventually bring out improvement on employees' performance.

9.2 Suggestions for further studies

(1) For further studies, other related factors, such as culture adaptation, should be explored as a variable in improving organizational management.

(2) In-deep interviews of the focus group and interviews with relevant executives should be conducted. To understand the concepts and directions that lead to the most efficient and effective working processes.

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Multiple Mediation Effects of Emotion and Subjective Norms toward Electronic Loyalty of Online Users

Dr. Thanyanan Boonyoo

Lecturer, Doctor of Business Administration Program, Southeast Asia University

E-mail: thanyanan7@gmail.com

Wornpahol Sangtian

International Sales Department Head, Ekarat Engineering Public Company Limited

E-mail: wsangtian@gmail.com

Kanokorn Boonmakerd

Operating personnel officers, Faculty of Business Administration, Ramkhamhaeng University

E-mail: boonmakerd@hotmail.com

ABSTRACT

This study aimed to: (1) explore subjective norms, emotion (i.e. pleasure, arousal, and dominance) and electronic loyalty of online users; and (2) explore the effects of emotion (i.e. pleasure, arousal, and dominance) as multiple mediation factors to subjective norms and electronic loyalty of online users. This qualitative exploratory study consisted of 500 online users as a sample and used a questionnaire as a research tool. Statistical analyses in this study were percentage, means, standard deviation (SD) and the structural equation analysis. The findings of the study revealed that psychologically subjective norms, emotional users (i.e. pleasure, arousal, and dominance) and electronic loyalty of the online users overall were averaged at a high level. The results of the structural equation analysis showed that the effects of emotional users including pleasure, arousal, and dominance were multiple mediation factors between psychological subjective norms and electronic loyalty of online users. The findings of this study can be used as a guideline for planning and designing strategies for online business in order to increase electronic loyalty for online user.

KEYWORDS: subjective norms, emotion, electronic loyalty

1. Introduction

Business transactions have continuously changed and are increasingly being competitive. The consumers' purchasing and demands grow gradually. The consumer relation is regarded as a significant factor and a necessity toward their achievement and long-term business survivals (Lam, Chiang & Parasuramm, 2008,

p. 19; Mirabi et al., 2015, p. 267). Meanwhile, the growth of online users has expanded as an important part of business transactions. Purchase behaviors of online users in online-shopping products have been gradually increasing. According to National Statistics Organization's analysis (2014), overall values of purchasing online product in Thailand from 2007 to 2012 had increased at 42.58%. As classified in the entrepreneur sectors, it was found that electronic business transactions, cooperating their buying and selling products together, have been growing at a highest level (55%), whereas electronic businesses among consumers and private and state sectors have been increasing only at 47.75% and 30.39% consecutively.

Technology development has contributed in electronic businesses and consequently became a significant factor for Thai economic system. (Parsasuraman, 2000, p. 307; Yi, Tung & Wu, 2003, p. 2) Some Internet users switched to online buying and this behavior is increasing that they tended to be loyal customers. However, some online users have not done it conventionally. 93.60% of these online users do not purchase online any products due to the following reasons: (1) complicated steps of online purchase (15%); (2) unseen authentic products (36.2%); (3) information security (3.7%); and (4) uncertainty of website technology in (1%) (National Statistics Organization, 2014). Boonyoo et al. (2016, p. 80) stated that one way to promote sustainable competitive advantage of electronic business transactions is that these business transactions should integrate strategies to manage the behavioral consumers' loyalty. Likewise, Vahdati & Nejad (2016, p. 2) stated that the effects of human relationship and technology circumstances have affected consumers' loyalty. Consequently, Venlathesh & Bala (2008, p. 276) claimed that psychologically subjective norm is a highly important key factor to emerge societal behavior procedures. As a result, subjective norm is a key factor to contribute the attempts to apply technology as psychological subject norm. Additionally, based on technological dimensions and the acceptance of technology, happening in environmental changes, this causes feelings or behaviors which easily encourage consumers' electronic loyalty (Lee et al., 2011, p. 1195). Furthermore, feelings of users have affected consumers' electronic loyalty as well (Kulviwat et al., 2007, p. 1059; Hsieh et al., 2014, p. 225).

Based on the aforementioned information, the researchers explored the effects of users' emotion as a modified mediated factor correlated to the psychologically subjective norms towards electronic loyalty of the online users, and explore factors correlated with those multiple factors, to further organize and plan strategic research tools which would contribute to loyalty of groups of online users.

2. Research Objectives

(1) To explore subjective norms, emotion (i.e. pleasure, arousal, and dominance) and electronic loyalty of online users.

(2) To explore the effects of emotion (i.e. pleasure, arousal, and dominance) as multiple mediation factors to subjective norms and electronic loyalty of online users.

3. Delimitations

This study is a quantitative study which consists of 1,398,831 online users in Thailand (National Statistics Organization, 2014). Participants in this study are 500 online users in Thailand who are randomly selected using stratified random sampling and simple random sampling.

4. Review Literature

After reviewing the literary works, concepts, theories, and related research studies, the researcher has summarized as the following:

(1) Subjective Norm (SN)

Subjective Norm involves the receptive level of an individual in societal procedures which may demonstrate whether he/she will follow the accepted behavior or receive the societal pressure to do or not to do an action (Venkatesh & Bala, 2008, p. 276). Moreover, it is a belief which derived from a reference to an individual or a group who supports specific behavior that should be held as acceptable. This subjective norm may encourage these citizens or groups of them to have state of emotions and five-sense factors, causing several needs to be intended behaviors or loyalty for those needs. According to a study by Ham, Jeger & Ivakovic (2015, p. 740) subjective norm has an influence on loyalty, which subjective norm composed of descriptive norm and social norm. Such factors affect the perceptual process of thinking, emotion and feeling (Chang et al., 2014, p. 168; Aertsens, 2009, p. 1140).

(2) Emotion (EM)

It is a state of psychological action of each individual which arouses him or her to do any actions responding his or her needs and consumption behaviors. Emotions can be changed gradually and it is difficult to handle. However, it can be perceived by actions of learned behaviors (Kulviwat et al., 2007, p. 1059). Emotions of users consist of pleasure (PL), arousal (AR), and dominance (DO). First of all, pleasure (PL) is the individual's internal emotions such as appreciation, pleasure and satisfaction with any stimulating factors. Next, arousal (AR) is the exciting feeling from media encouragement such as new technologies to cause their demands. Finally, dominance (DO) is the state of the perceived individual from any stimulus that can dominate the situations and can be independent or not rely on any dynamic situations. These emotions of users are regarded as the whole beliefs and feelings of psychological states both in positive and negative ways. They can promote or against decisive behaviors both for their own behavior, or others. According to a study by Kulviwat et al. (2007, p. 1059), emotion of users has an affect on consumers' electronic loyalty. Emotion of users consist of pleasure, arousal and dominance. In this study, it was found that those 3 components reflecting the level of individual emotion which have effect on higher level of electronic loyalty (Hsieh et al., 2014, p. 225).

(3) Electronic Loyalty (EL)

It is a behavior causing attempt and implications which can be changeable to repurchase or repeat consumption in the near future. Furthermore, it is a positive attitude of consumers creating marketing processes --a mechanism that contributes positive influence and develops close relationship with their consumers (Dkediencia et al., 2015, p. 43). It depends on communication procedure which strongly contributing to the consumers' relations with product brands and eventually causes their real brand loyalty (Khan, Humayun & Sajjad, 2015, p. 165).

5. Research Framework

Based on the aforementioned literature review, the researcher has created the conceptual framework of this study as the following:

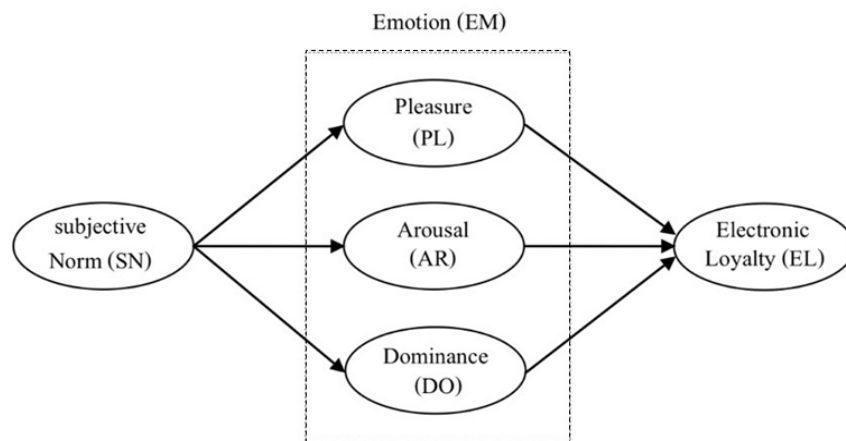


Figure 1 Research Framework

6. Research Hypotheses

Hypothesis (H1) Subjective norm has impact directly on the online users' emotions of pleasure.

Hypothesis (H2) Subjective norm has impact directly on the online users' emotions of arousal.

Hypothesis (H3) Subjective norm has impact directly on the online users' emotions of Dominance.

Hypothesis (H4) Emotions pleasure of online user has impact directly on the electronic loyalty.

Hypothesis (H5) Emotions arousal of online user has impact directly on electronic loyalty.

Hypothesis (H6) Emotions Dominance of online user has impact directly on the electronic loyalty.

Hypothesis (H7) Emotions pleasure of online user as the mediator variable correlated with the influences of Subjective norm and electronic loyalty.

Hypothesis (H8) Emotions arousal of online user as the mediator variable correlated with the influences of Subjective norm and electronic loyalty.

Hypothesis (H9) Emotions Dominance of online user as the mediator variable correlated with the influences of Subjective norm and electronic loyalty.

7. Research Methodology

This quantitative research focused on facts and the participants were 1,398,831 online users in Thailand (National Statistics Organization, 2014). The samples of 500 online users were randomized using Comrey & Lee's concept (1992, p. 125). This concept identified that the best level of sample sizes is 500 participants (using Simple Random Sampling and Stratified Random Sampling). Research tool in this study was a questionnaire which included participants' personal information in the first part. Parts two to six included the assessment of subjective norms and online users' emotions (i.e., pleasure, arousal, and dominance). Questionnaire employed the 5-level of Likert's Scale (Likert, 1932). To analyze the data, the researcher used statistical program, including (1) descriptive statistics—percentage and standard deviation; and (2) the structural equation analysis using PLS Graph 3.0 program (Chin, 2001).

8. Research Findings

(1) The results of participants' information analysis found that the overall informants were 297 females and 190 informants have bachelor degree educational level. The total of 342 informants has their monthly income of approximately 10,001-30,000 baht; whereas 332 informants were employees or private business officers.

(2) The results of descriptive statistical analysis of subjective norm, users' emotions (pleasure, arousal, and dominance) and electronic loyalty as shown in Table 1.

Table 1 The results of descriptive statistical analysis

Latent Variable	\bar{X}	SD	CV	Level
Subjective Norm (SN)	3.89	0.666	0.171	High
Users' Emotions (EM)	3.68	0.552	0.150	High
Pleasure (PL)	3.61	0.745	0.206	High
Arousal (AR)	3.66	0.578	0.157	High
Dominance (DO)	3.77	0.665	0.176	High
Electronic loyalty (EL)	3.81	0.651	0.170	High

Table 1 shows the results of descriptive statistical analysis of subjective norm, users' emotions (pleasure, arousal, and dominance) and electronic loyalty revealed that majority of the informants had opinions related to electronic loyalty at the highest level (\bar{X} =3.81, SD=0.651), followed by subjective norms (\bar{X} =3.89,

SD=0.666). Whereas dominance of online users' emotion were at $\bar{X}=3.77$, SD=0.665, arousal of the online user were $\bar{X}=3.66$, SD=0.578, and pleasure were at $\bar{X}=3.61$, SD=0.745.

(3) The results using structural equation analysis through PLS Graph 3.0 program (Chin, 2001), analyzing direct and indirect regressive coefficient effects toward electronic loyalty as shown in the figure 2:

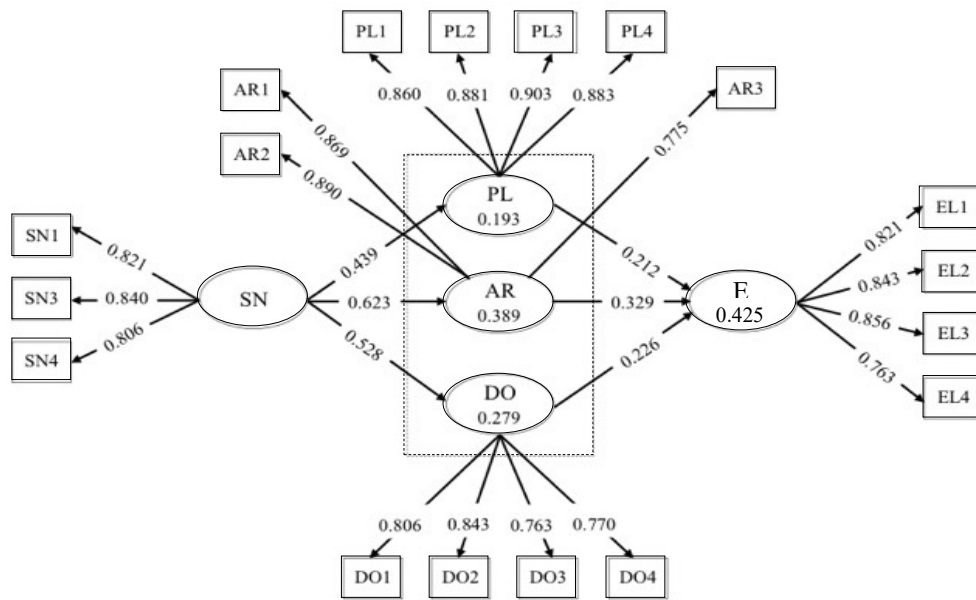


Figure 2 The baseline of structural equation modeling relationships

Figure 2 shows the baseline of Structural Equation Modeling relationships of structural factors affecting electronic loyalty. The research findings revealed that (1) subjective norms had directly affected toward pleasure of the online user' emotion (DE=0.439), arousal of the online users' emotion (DE=0.623) and dominance of the online users' emotion (DE=0.528). (2) Regarding subjective norm, it had indirectly influenced the online users' electronic loyalty. Online users' emotions of pleasure were at 0.093 (IE=0.093), followed by their arousal (IE=0.205), and their dominance (IE=0.119). In terms of online users' emotions (i.e. pleasure, arousal, and dominance) had directly influenced toward their electronic loyalty at DE = 0.212, 0.329, and 0.226 respectively.

The researcher has summarized as the baseline of Structural Equation Modeling relationships of structural factors affecting electronic loyalty in Table 2.

Table 2 The baseline of structural equation modeling relationships

Latent Variable	R ²	Effect	SN	PL	AR	DO
Electronic Loyalty (EL)	0.425	DE	0.000	0.212***	0.329***	0.226***
		IE	0.000	0.000	0.000	0.000
		TE	0.000	0.212	0.329	0.226
Pleasure Emotion (PL)	0.193	DE	0.439***	0.000	0.000	0.000
		IE	0.000	0.000	0.000	0.000
		TE	0.439	0.000	0.000	0.000
Arousal Emotion (AR)	0.389	DE	0.623***	0.000	0.000	0.000
		IE	0.000	0.000	0.000	0.000
		TE	0.623	0.000	0.000	0.000
Dominance Emotion (DO)	0.279	DE	0.528***	0.000	0.000	0.000
		IE	0.000	0.000	0.000	0.000
		TE	0.528	0.000	0.000	0.000

Notes: DE = Direct Effect, IE = Indirect Effect, TE = Total Effect

(4) Results of hypothesis testing of multiple mediator factors correlated with subjective norm toward online users' electronic loyalty were shown in Table 3.

Table 3 Results of testing hypotheses

Hypotheses	Coefficient (Coef.)	t-test	Results
H1 SN → PL	0.439***	9.163	supportive
H2 SN → AR	0.623***	16.185	supportive
H3 SN → DO	0.528***	13.307	supportive
H4 PL → EL	0.212***	3.916	supportive
H5 AR → EL	0.329***	5.252	supportive
H6 DO → EL	0.226***	3.422	supportive

Notes: (* refers to p-value ≤ 0.10 or $t \geq 1.65$) (** refers to p-value ≤ 0.05 or $t \geq 1.96$) (***) refers to p-value ≤ 0.01 or $t \geq 2.58$)

Table 3 shows that subjective norms (SN) had influenced on online users' emotions; i.e., pleasure (PL), arousal (AR), and dominance (DO), with t-test score at 9.163, 16.185, and 13.307 respectively; whereas the t-test score of emotion of online users (including pleasure, arousal, and dominance) toward their electronic loyalty were at 3.916, 5.252, and 3.422 respectively.

(5) In terms of the influence of mediator variables as transforming variables of the relationship among independent variables and dependent variables as shown in Table 4.

Table 4 Results of indirect structural equation modeling affecting electronic loyalty

Hypotheses					Effect	Boot SE	Boot LLCI	Boot ULCI
H4	SN	→	PL	→	EL	0.124	0.028	0.191
H5	SN	→	AR	→	EL	0.172	0.034	0.248
H6	SN	→	DO	→	EL	0.173	0.033	0.245

Table 4 Regarding the influences of multiple mediator factors causing independent and dependent factor changes, it was found that online users' emotions-pleasure, arousal, and dominance-were mediator factors between subjective norm and electronic loyalty. As a result, the multiplier result of lower (Boot LLCI) to upper boundary coefficient (Boot ULCL) range did not cover 0. This means online users' emotions-pleasure, arousal, and dominance-were mediator factors between subjective norm and electronic loyalty; therefore, the Boot LLCL of the multiple mediator factor results were at 0.077, 0.111, and 0.112 respectively; whereas the Booth ULCL of those were at 0.191, 0.248, and 0.245 consecutively.

9. Discussions

This study has classified the research findings into each factor as follows:

(1) In terms of subjective norm, the results of this study showed that it had affected online users' emotion in various types, including pleasure, arousal, and dominance. It is consistent with Ham, Jeger & Ivkovic's (2015, p. 740) study that descriptive and societal norms had affected the perceived procedures both in their thoughts and in emotions which would be differed by various environmental changes. As Chang et al (2014, p. 168) stated that subjective norm was one factor that caused individual's state of emotions. When environments change, their product consumption needs will also change (Aersens, 2009, p. 1140).

(2) In terms of online users' emotions (pleasure, arousal, and dominance), it was found that those factors had affected their brand loyalty. It was consistent with Kulviwat et al.'s study (2007, p. 1059), which stated that emotions of consumers had influenced their electronic loyalty as well (Hsieh et al., 2014, p. 225).

10. Suggestions

From the research findings, the researchers would like to give some suggestions as follows:

10.1 Implications of the study

(1) Regarding subjective norm, it is an emotional behavior increasing consumer's emotions by encouraging them acknowledge the advantage of online system in Thailand.

(2) The results of the study showed that consumer's emotions-pleasure, arousal, and dominance- were significant factors correlated with the increase of online users' subjective norm. Furthermore, it highlighted the creation of loyalty foundation to motivate the of increase online purchases.

10.2 Suggestions for further study

(1) It should explore other related factors (such as the readiness of technology innovation, satisfaction) as electronic loyalty factor.

(2) It should be conducted in a hybrid way. In terms of qualitative research, there should be in-depth interviews with online consumers, to obtain the causal factor of electronic loyalty.

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WECHAT USES AND GRATIFICATIONS FOR HEALTH INFORMATION AMONG CHINESE ELDERLY USERS

Xuanle Zhu

Master of Communication Arts (Global Communication)

Graduate School, Bangkok University

Email: 8157977@qq.com

Advisor: Asst. Prof. Dr. Pacharaporn Kesaporn

School of Communication Arts, Bangkok University, Thailand

Email: pacharaporn.i@bu.ac.th

ABSTRACT

The study aimed to examine the uses of WeChat and the gratifications of the Chinese elderly. Two-hundred respondents who were exposed to WeChat health information in the past one year period have participated in this survey. The respondents were selected using convenience sampling. The mean, standard deviation, and percentage were being tabulated and analyzed using One-way ANOVA with the significance level of 0.05, or 0.10. The findings revealed the following points: Firstly, Chinese elderly who have different frequency of using WeChat health information ($F(195, 4) = 2.977^{**}$, $p < .05$) and educational background ($F(194, 5) = 2.350^{**}$, $p < .05$) had significant different gratification sought about health information via WeChat, but those with different gender, age, personal income per month and stickiness to WeChat health information did not have significant different gratification sought about health information via WeChat. Secondly, Chinese elderly who have different age ($F(194, 5) = 2.801^{**}$, $p < .05$) and frequency of using WeChat health information ($F(195, 4) = 2.984^{**}$, $p < .05$) had significant different gratification obtained about health information via WeChat, but those who have different gender, personal income per month educational background and stickiness to WeChat health information had no significant different gratification obtained about health information via WeChat.

KEYWORDS: Uses and Gratifications, Health Information, Chinese Elderly, WeChat

1. Introduction

On November 19, 2017, Tencent officially released the latest "2017 WeChat data report." According to data released by Tencent (2017), WeChat has become the most popular and influential chat software in China. As of September 2017, WeChat has more than 900 million registered users per day and 17 percent growth in 2016, among which 50 million are elderly users. In addition to interpersonal communication, information sharing

and communication is also one of the important purposes for people to use WeChat. WeChat little program is now covers more than 20 categories, industry of fine classification more than 200, including monthly access to the largest number of industry categories are transportation, electric business platform, tools, service life and IT technology. According to a survey conducted by Tencent in 2017, the number of health information types in the WeChat reading statistics is 210 million, and the number of readers is second. In the ranking of WeChat public number posts, the top five were emotional information, health care, political and legal news, disease pathology and cooking. In its use of the WeChat public number, Tencent found that the public number of health information has a large number of fans, among which the elderly users are the main audience. WeChat has gradually become an indispensable part of the daily life of the elderly in China

The internet and social media provide people with a range of benefits, and opportunities to empower themselves in a variety of ways. People can maintain social connections and support networks that otherwise wouldn't be possible and can access more information than ever before. The communities and social interactions people form online can be invaluable for bolstering and developing people's self-confidence and social skills especially health –related issues (Al-Menayes, 2015). With the tentacles of the Internet reaching into every field and every corner, society has entered the information age. WeChat, which was launched in 2011, has absorbed a large number of users within a short period of time, and has unconsciously reshaped social interactions (Xu, 2015). Internet network information center (CNNIC) in the 39th "China Internet development statistics report" in 2016, over the age of 50 Internet users account for 9.4% of the total number of Internet users, 0.2% increase from 2015. Internet and related application further permeate the life of old people.

Despite the fact that new media has been permeated among elderly people, most of the past studies found that motivation and needs change the ways people watched television (Leung & Wei, 2000; Lucas & Sherry, 2004; Sherry, Lucas, Greenberg & Lachlan, 2006); Leung and Wei (2000) examined the use and gratifications of the cellular phone. They found that young women who had less education tended to talk longer on their cellular phones. Sherry and her research colleagues (2006) examined the use and gratifications of video games. The research results found that such games satisfied several motivations for their respondents including these aspects: challenge, arousal, diversion, fantasy, competition, and social interaction. The social interaction finding is particularly noteworthy, given the regular belief, assumption and perception that these media applications tend to isolate individuals who live in solitude, when their only perception of the 'reality' of friends is who they meet as an Avatar on the game playing websites. However, very few studies have examined the uses and motivation of elderly people in using WeChat health information.

The researcher used Uses and gratifications Theory (UG) as a theoretical framework for this study. Uses and Gratification (UGT) is an audience-centered approach to mass communication, which posited that the reasons why people use media helps explain their media choices and consequences. According to this approach, gratifications sought (GS) represent motives for media exposure and are based on expectations about media

content. Gratifications obtained (GO), on the other hand, are perceived personal outcomes, they are, therefore, sensitive to media content and feedback to influence content expectations (Palmgreen, Wenner, & Rayburn, 1980). Thus, if their individual expectations were met, their satisfaction will be obtained. Palmgreen et al. (1980) developed two 15-item scales to measure the GS and GO. The items measured five GS and GO dimensions, including general Information seeking, decisional Utility, entertainment, interpersonal Utility, and parasocial interaction.

2. Research Objectives

(1) To examine how differences in demographics characteristics and health conditions influence gratification sought and gratification obtained of using Internet health information among the Chinese elderly via WeChat

(2) To examine whether gratification sought and gratification obtained of using Internet health information among the Chinese elderly via WeChat are the significant predictors of their relational satisfaction toward small group communication in WeChat.

3. Research Framework

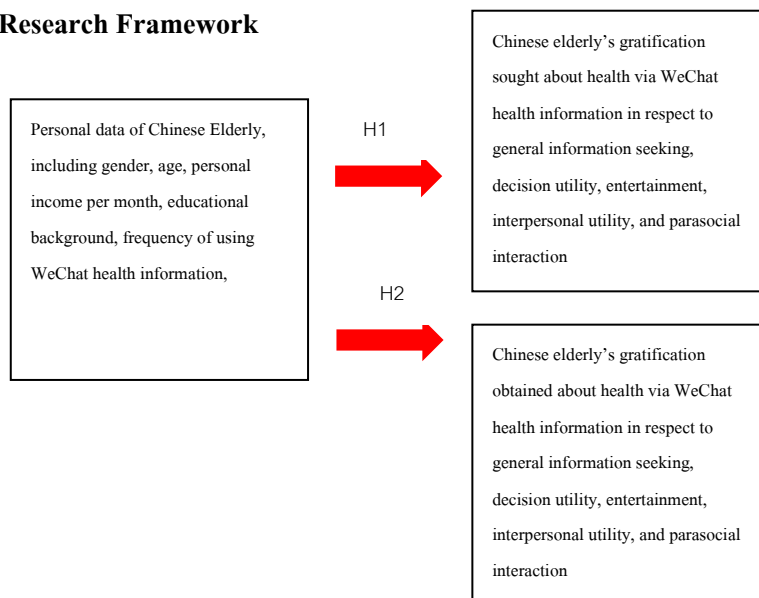


Figure 1 Research Framework

4. Research Methodology

4.1 Research Design: This is an online survey research that examined the influence of personal data on their gratification sought and gratification obtained about health information among Chinese elderly in China.

4.2 Population and Sample: The population was Chinese elderly whose age is over 55 years old and have been exposing to WeChat health information during the past two-year period. The samples are selected

using convenience sampling from different regions of Shanghai, China. Shanghai first entered the aging society in 1979. They have the ability to independently use WeChat function and have some understanding and contact with WeChat health information. Due to the available WeChat report, the researcher used Chinese Elderly WeChat users who are currently using WeChat health information in the past two year's period from July 2016 to July 2018, because the percentage of Elderly Chinese WeChat uses are increasing rapidly.

4.3 Variables: The independent variables were (1) Chinese elderly's personal data (i.e., gender, age, personal income per month, educational background, frequency of using WeChat health information, and stickiness to WeChat health information); (2) intervening variables were Chinese elderly's uses and gratification sought toward WeChat health information in relations to general seeking, decision utility, entertainment, interpersonal utility, and parasocial interaction and Chinese elderly's uses and gratification obtained toward WeChat health information in relations to general seeking, decision utility, entertainment, interpersonal utility, and parasocial interaction; (3) dependent variables Chinese elderly's relational satisfaction toward small group communication in WeChat.

4.4 Research Instrument: There were 3 sections in this survey. The first section had 6 nominal and ordinal questions, inquiring about the gender, age, personal income per month, educational background, frequency of using WeChat health information, and stickiness to WeChat health information. The second section had 15 statements using a 5-likert scale to examine the gratification sought in relations to general seeking, decision utility, entertainment, interpersonal utility, and parasocial interaction. The third section had 15 statements using a 5-likert scale to examine the gratification obtained in relations to general seeking, decision utility, entertainment, interpersonal utility, and parasocial interaction after using WeChat health information. All sections had Cronbach alpha higher than 0.70, which is considered to be reliable (Hong, 2005).

4.5 Data Collection: The data collection was conducted from April – June, 2018, by using convenience sampling.

4.6 Data Analysis: Hypothesis 1 and Hypothesis 2 used One-Way ANOVA.

5. Research Findings

5.1 Summary of Descriptive findings

Based on the descriptive findings, majority of the Chinese elderly WeChat were female (55.5%, n = 111) and male (45.5%, n = 89), aged 60-64 years (20.5%, n = 41), earned less than 4,000 yuan per month (54.5%, n = 109), completed high school (44%, n= 88). And, majority of the sample (24.5%, n = 57) seldomly use WeChat health per day (i.e. using only 1-2 times per day) and 34.5% (n = 69) of the sample spent time reading WeChat at a low stickiness (i.e. only 30 minutes searching the information in Wechat health information per visit).

The descriptive findings found that Chinese elderly had medium level of gratification sought (Mean = 3.58, SD= 0.99) for WeChat health information. When examining each construct, the results revealed that there they high gratification sought for decision utility general information seeking (Mean = 3.70, SD= 1.16) and

medium gratification sought for general information seeking (Mean = 3.58, SD= 0.95), parasocial interaction (Mean = 3.56, SD= 0.95), interpersonal utility and entertainment (Mean = 3.52, SD= 1.12), respectively. In respect to their gratification obtained, the descriptive results found that they had high gratification obtained for WeChat health information (Mean = 3.64, SD= 0.99). When examining each construct of gratification obtained, the results revealed that Chinese elderly had high gratification for decision utility (Mean = 3.74, SD= 1.16), general information seeking (Mean = 3.68, SD= 0.95), parasocial interaction (Mean = 3.63, SD= 0.97), interpersonal utility (Mean = 3.59, SD= 1.03), respectively.

5.2 Summary of Hypothesis Testing

Hypothesis 1: Chinese elderly who have different personal data (gender, age, personal income per month, educational background, frequency of using WeChat health information, and stickiness to WeChat health information) will have significant different gratification sought about health information via WeChat.

To test **Hypothesis 1**, the analysis of One-Way ANOVA in Table 1 revealed that Chinese elderly who have different educational background had significant gratification sought for interpersonal utility about health information via WeChat ($F_{(194, 5)} = 2.350^{**}$, $p < .05$). Analysis of Variance revealed that Chinese elderly who have different educational background had significant different gratification sought for decision utility ($F_{(194, 5)} = 2.026^{*}$, $p < .10$) and entertainment ($F_{(194, 5)} = 1.981^{*}$, $p < .10$) about health information via WeChat, respectively. However, the results revealed that educational background did not significant influence general information seeking ($F_{(194, 5)} = 1.839^{**}$, $p > .05$), parasocial interaction ($F_{(194, 5)} = 1.137^{**}$, $p > .05$). As shown in Table 2, Analysis of Variance revealed that Chinese elderly who have different frequency of using WeChat health information had significant gratification sought for entertainment about health information via WeChat ($F_{(195, 4)} = 2.977^{**}$, $p < .05$). Analysis of Variance revealed that Chinese elderly who have different frequency of using WeChat health information had significant gratification sought for decision utility ($F_{(195, 4)} = 2.931^{**}$, $p < .05$) and interpersonal utility ($F_{(195, 4)} = 2.589^{**}$, $p < .05$) about health information via WeChat, respectively. However, the results revealed that frequency of using WeChat health information did not significant influence general information seeking ($F_{(195, 4)} = 1.458^{**}$, $p > .05$), parasocial interaction ($F_{(195, 4)} = 1.149^{**}$, $p > .05$). Thus, hypothesis 1 was partially accepted.

Table 1 One-way ANOVA Analysis of the relationship between educational background and gratification sought about health information via WeChat.

Gratification sought for WeChat Health Information		Sum of Squares	df	Mean Square	F	Sig.
General information seeking	Between Groups	8.204	5	1.641	1.839	0.107
	Within Groups	173.129	194	0.892		
	Total	181.333	199			
Parasocial interaction	Between Groups	5.193	5	1.039	1.137	0.342
	Within Groups	177.252	194	0.914		
	Total	182.444	199			
Decision utility	Between Groups	13.134	5	2.627	1.981*	0.083
	Within Groups	257.212	194	1.326		
	Total	270.347	199			
Interpersonal utility	Between Groups	12.313	5	2.463	2.350**	0.042
	Within Groups	203.34	194	1.048		
	Total	215.653	199			
Entertainment	Between Groups	12.478	5	2.496	2.026*	0.077
	Within Groups	238.917	194	1.232		
	Total	251.395	199			

Note: ** $p < .05$, * $p < .10$ **Table 2** One-way ANOVA Analysis of the influence of frequency of using WeChat health information on gratification sought about health information via WeChat

Gratification sought for WeChat Health Information		Sum of Squares	df	Mean Square	F	Sig.
General information seeking	Between Groups	5.267	4	1.317	1.458	0.216
	Within Groups	176.066	195	0.903		
	Total	181.333	199			
Parasocial interaction	Between Groups	4.2	4	1.05	1.149	0.335
	Within Groups	178.245	195	0.914		
	Total	182.444	199			
Decision utility	Between Groups	15.333	4	3.833	2.931**	0.022
	Within Groups	255.014	195	1.308		
	Total	270.347	199			
Interpersonal utility	Between Groups	10.877	4	2.719	2.589**	0.038
	Within Groups	204.777	195	1.05		
	Total	215.653	199			
Entertainment	Between Groups	14.47	4	3.618	2.977**	0.02
	Within Groups	236.925	195	1.215		
	Total	251.395	199			

Note: ** $p < .05$, * $p < .10$

Hypothesis 2: Chinese elderly who have different personal data (gender, age, personal income per month, educational background, frequency of using WeChat health information, stickiness to WeChat health information) will significant different gratification obtained about health information via WeChat.

To test **Hypothesis 2**, the analysis of One-Way ANOVA in Table 3 revealed that Chinese elderly who have different age had significant gratification obtained for general information seeking about health information via WeChat ($F_{(194, 5)} = 2.801^{**}$, $p < .05$). Analysis of Variance revealed that Chinese elderly who have different age had significant gratification obtained for entertainment ($F_{(194, 5)} = 2.507^{**}$, $p < .05$) about health information via WeChat. However, the results revealed that age did not significant influence parasocial interaction ($F_{(194, 5)} = 1.853^{**}$, $p > .05$), decision utility ($F_{(194, 5)} = 1.843^{**}$, $p > .05$), interpersonal utility ($F_{(194, 5)} = 1.626$, $p > .05$). As shown in Table 4, One-way ANOVA Analysis revealed that Chinese elderly who have different frequency of using WeChat health information had significant gratification obtained for general information seeking about health information via WeChat ($F_{(195, 4)} = 2.984^{**}$, $p < .05$). Analysis of Variance revealed that Chinese elderly who have different frequency of using WeChat health information had significant gratification obtained for decision utility ($F_{(194, 5)} = 2.11^{**}$, $p < .10$) about health information via WeChat. However, the results revealed that frequency of using WeChat health information did not significant influence interpersonal utility ($F_{(195, 4)} = 1.66^{**}$, $p > .05$), entertainment ($F_{(195, 4)} = 1.52^{**}$, $p > .05$), parasocial interaction ($F_{(195, 4)} = 1.17^{**}$, $p > .05$). Thus, hypothesis 2 was partially accepted.

Table 3 One-way ANOVA Analysis of the relationship between age and gratification obtained about health information via WeChat.

Gratification obtained for WeChat Health Information		Sum of Squares	df	Mean Square	F	Sig.
General information seeking	Between Groups	12.107	5	2.421	2.801**	0.018
	Within Groups	167.715	194	0.865		
	Total	179.822	199			
Parasocial interaction	Between Groups	8.56	5	1.712	1.853	0.104
	Within Groups	179.26	194	0.924		
	Total	187.82	199			
Decision utility	Between Groups	12.166	5	2.433	1.843	0.106
	Within Groups	256.092	194	1.32		
	Total	268.258	199			
Interpersonal utility	Between Groups	8.508	5	1.702	1.626	0.155
	Within Groups	202.983	194	1.046		
	Total	211.491	199			
Entertainment	Between Groups	14.78	5	2.956	2.507**	0.032
	Within Groups	228.762	194	1.179		
	Total	243.542	199			

Note: ** $p < .05$, *** $p < .10$

Table 4 One-way ANOVA Analysis of the relationship between frequency of using WeChat health information and gratification obtained about health information via WeChat.

Gratification obtained for WeChat Health Information		Sum of Squares	df	Mean Square	F	Sig.
General information seeking	Between Groups	10.372	4	2.593	2.984**	0.02
	Within Groups	169.449	195	0.869		
	Total	179.822	199			
Parasocial interaction	Between Groups	4.406	4	1.101	1.171	0.325
	Within Groups	183.414	195	0.941		
	Total	187.82	199			
Decision utility	Between Groups	11.13	4	2.783	2.110***	0.081
	Within Groups	257.128	195	1.319		
	Total	268.258	199			
Interpersonal utility	Between Groups	6.99	4	1.748	1.666	0.159
	Within Groups	204.501	195	1.049		
	Total	211.491	199			
Entertainment	Between Groups	7.375	4	1.844	1.522	0.197
	Within Groups	236.167	195	1.211		
	Total	243.542	199			

Note: ** $p < .05$, *** $p < .10$

6. Discussion and Conclusion

Hypothesis 1 results coincided with Katz, Gurevitch and Haas (1973, cited in Katz, Blumler, & Gurevitch, 1974), which found that the mass media as a means by which individuals connect or disconnect themselves with others. They developed 35 needs taken from the largely speculative literature on the social and psychological functions of the mass media and put them into five categories: (1) Cognitive needs—Acquiring information, knowledge and understanding; (2) Affective needs—Emotion, pleasure, feelings; (3) Personal integrative needs—Credibility, stability, status; (4) Social integrative needs—Family and friends; and (5) Tension release needs—Escape and diversion. The results supported the Uses and Gratifications theory, which posited that members of the audience are not passive but take an active role in interpreting and integrating media into their own lives. This study suggested that people use the media to fulfill specific gratifications. The study found Chinese elderly users were using WeChat health information to sought gratifications about interpersonal utility, decision utility and entertainment. Hypothesis 1 results underscored the importance of educational background in shaping their expectation for WeChat health toward their decision utility and entertainment. In addition, the result showed that their frequency of using WeChat health information also influenced their expectation on entertainment, decision utility, interpersonal utility, respectively.

Hypothesis 2 results coincided with Katz, Blumler and Gurevitch (1974), which found that the social and psychological origins of needs which generate expectations of mass media or other sources, which lead to differential patterns of media exposure (or engagement in other activities), resulting in need gratifications and other consequences, perhaps mostly unintended ones. The results supported the Uses and Gratifications theory, which posited that the notion of active audience has conflated an extraordinary range of meanings, including utility, intentionality, selectivity and imperviousness to influence. This study suggested that audiences holds responsible for choosing media to meet their needs. The study found Chinese elderly users were using WeChat health information to obtained gratifications about general information seeking, entertainment and decision utility. Hypothesis 2 results underscored the age influenced their gratification obtained for general information seeking and entertainment but no significant effect on their gratification obtained for parasocial interaction, decision utility, and interpersonal utility.

Results from Hypothesis 1 to Hypothesis 2 supported the Uses and Gratifications theory, which suggested that people use the media to fulfill specific gratifications and audiences holds responsible for choosing media to meet their needs. The findings suggested that 1) Chinese elderly users were using WeChat health information to sought gratifications about interpersonal utility, decision utility and entertainment; 2) Chinese elderly users were using WeChat health information to obtained gratifications about general information seeking, entertainment and decision utility. WeChat health information should try to meet the needs and gratifications of the Chinese elderly WeChat users and improve the importance of WeChat health information to them.

7. Suggestions

Suggestion for Further Application

(1) WeChat health information should provide health-related to increase their decision utility and entertainment and try to reach Chinese elderly who have higher education extensively in the bachelor or higher level—not target only high school or vocational level—because health-related contents are very issue for all. Sixty-five percents of the sample in this survey completed only high school (44%) and vocational level (21.5%). Health information provided in WeChat should give more academic advices to enable to make their personal decision about health issues and also provide more entertaining contents to persuade them read the health contents with more enthusiasm and giving a joyful experience rather than a boring moment while reading the WeChat health information.

(2) Majority of Chinese elderly age 55-64 years (42.5%, n = 85) were exposed to the Wechat health information but those who were 70-79 and higher were exposed at the low rate. These age groups really need health information to take care of their own health, because they in the late aging period. Health information will be risk factor if they did not have sufficient information available for them. Hence, WeChat should plan a communication program to reach these age groups to meet their immediate needs.

Suggestions for Future Research

1. A similar study can be conducted in other places rather than Shanghai that there has a number of viewers in that provincial areas. There are other cultural values that might have relationship with gratification sought and gratification obtained about health information via WeChat. Therefore, the result may be different when studying in other areas.

2. This kind of study, moreover, can be conducted in both qualitative and quantitative methodology in order to get more details in the needs and perceptions of WeChat users because interview in qualitative methodology can help this research to get deeper in their gratification sought and gratification obtained about health information via WeChat. Thus, the study can help predict the WeChat users' gratification obtained about health information via WeChat.

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A SURVEY ON VIEW OF FINDING EMPLOYMENT AND REASONS TO CHOOSE A COMPANY BY STUDENTS OF DEPARTMENT OF JAPANESE FOR BUSINESS COMMUNICATION AT SRIPATUM UNIVERSITY

Assistant Professor, Yasumasa MORI

Department Chair, Japanese for Business Communication,

School of Liberal Arts, Sripatum University

E-mail: yasumasa.mo@spu.ac.th

ABSTRACT

The purpose of this paper was to clarify a view of finding employment and the reasons to choose a company by a questionnaire survey targeting 21 third-year students at the Department of Japanese for Business Communication, Sripatum University, Thailand. The questionnaire consisted of two questions and the number of valid respondents was 20 students. Cronbach's coefficient alpha was 0.99 in the first question and was 0.81 in the second question. The discussions were processed after the analysis of the respondents' answer behaviors. The research findings have revealed a variety of attitudes; personal satisfaction with labor, a job as a means of living, and self-fulfillment through the work, on the other hand, it was also found that career-minded attitudes were extremely low. As for the reasons for a company choice, the working conditions were prioritized, such as managerial stability or treatment in a company, and it also showed a tendency to value workplace environment rather than a company itself. From these findings, it is expected to improve the quality of career education through a set of career-related course subjects in the curriculum and to provide appropriate advice and guidance in each subject for each grade.

KEYWORDS: view of finding employment, reasons to choose a company, career education, internship, Sripatum University

1. INTRODUCTION

According to the overview of the Japanese economic domain in Thailand, the direct investment on a monetary base was 79,629 million baht in 2016 (JETRO) and the amount of Japanese investment accounted for 22% in Thailand, namely, it took the first rank. In addition, the exports to Japan amounted to 215.3 billion dollars and the imports from Japan amounted to 194.7 billion dollars in the commercial relations centered on trade between the countries in 2016. Japan as Thailand's trading partner was ranked third in export and second in import (Ministry of Foreign Affairs of Japan). Speaking of investment and commercial intercourse, with the effect of the Japan-Thailand Economic

Partnership Agreement (JTEPA) on November 1, 2007, it can be concluded that both of the two countries are increasing closeness of the economic relationship through investment and commerce. In such a context, it was confirmed that the number of Japanese-affiliated companies advanced to Thailand was 5,444 companies, and there were various kinds of industry sectors (JETRO, 2017; 6). As it can be also seen in the recruitment process by human resource dispatch companies or in the employment information on recruitment sites in Thailand, it seems that the demand for Thai human resources with Japanese language literacy is, regardless of a business category or a job type, very strong in Japanese companies.

A Japanese language major course has been established since 2015 at Sripatum University, Bangkheng Main Campus, Bangkok (herein referred to as SPU). The students, who are enrolled in major Japanese course for the Business Communication Department, must take compulsory subjects of *JBC229 Japanese Corporate Culture and Work Style* in the second semester of the second-year and of *JBC332 Japanese for Management* in the first semester of the third-year. Needless to say, these subjects are offered jobs in Japanese companies in mind. Subsequently, they have to take a subject of *JBC498 Japanese for Business Communication Pre-cooperative Education* in the summer semester of the third-year, and a subject of *JBC499 Japanese for Business Communication Cooperative Education* in the second semester of the fourth-year. In the industry-collaborative curriculum, it is required to participate in 16-week internships (a work experience program or occupational experience), and more than 80% of Japanese language usage rate is also required for interns in a company that accepts an internship program. Therefore, it will be a realistic problem for students to be considerations of internship in Japanese company with a quite high Japanese language rate. Although it is not indispensable for them to start working for a Japanese company after graduation, it is presumed that the employment in a Japanese company gives a conditionally advantageous opportunity to them in terms of a workplace where they can make the most of a specialized field or a career path as a professional in Japanese business. In that sense, it is natural that there is not only Japanese language education and business education, but also guidance of internship program based on an industry-academia partnership and of students' job-hunting activities including their awareness and understanding of employment, for educational purposes of the Japanese language major course.

Based on the points described above, the researcher recognized the necessity to conduct a classroom research on the students' view of finding employment and the reasons to choose a company from a standpoint of career education for students in Business Japanese major course and as a part of advancing an internship program or job-hunting endeavors.

2. SIGNIFICANCE OF RESEARCH

In a career education involving internship programs in college and job-searching activities before and after graduation, it is thought that a certain significance will be recognized by investigating how a view of finding employment or a view on a job and work including attitudes to a career affects the reasons to choose a company, that is, it will be a good opportunity to think specifically about the purpose, contents, and methods of industry-university collaborative education. In that sense, the results obtained in this survey can be considered as valuable data that can be effectively used in career education for the students majoring in Business Japanese. In the meanwhile, a lot of human resources with Japanese language skills and its communication competence, of course, are employed in Japanese-affiliated companies operating in Thailand. In addition to this, it is also a fact that considerable degree of Japanese corporations is seriously considering the promotion of exceptional Japanese language human resources and executive candidates from a medium- and long-term perspective, and the needs will be also expected to increase more and more concurrently (JETRO, 2018; 72-75). At the other extreme, it is also expected to benefit for career education at university, that is to say, it is useful for a succession of career vision, career design, career plan, career action, career path, and career development in order to enable to make a job-hunting process for students from an independent-minded stance with the application of a proactive approach.

3. PREVIOUS RESEARCH

A number of surveys on a view of finding employment, occupation and work, or the consciousness towards to employment or job-hunting process were conducted by all kinds of institutions or organizations, regardless of a sector type (whether public or private). Firstly, the study trends are, here, introduced with a focus on the case studies in Japan. The Cabinet Office, Government of Japan (2018) has published a *White Paper* entitled 'Children and Young People' in order to clarify current status and issues in occupational self-reliance and employment support as an annual report since 2010. The young people's consciousness survey on employment reported 1) how young people (teenage and twenties) perceive the work, 2) what sort of things they emphasize on the occasion of choosing their occupation, 3) they hope to continue learning after finding employment or not, 4) what kind of perspectives they have for the future, and so forth in the *White Paper*. Secondly, the academic research in educational institutions have been performed by approaches from a variety of viewpoints. Owaki et al. (2009) carried out an investigation on the views of finding employment, places of employment, criteria for choosing occupations, ways to obtain information about employment, work experience, and so on. Nishimura & Taneichi (2011) had a semi-structured interview on a view of finding employment or job-hunting activities for 18 university students and analyzed the data by a modified grounded theory approach (M-GTA). Miyamoto (2011) researched the proceedings and changes in work awareness as the axis of three items; view of employment,

intention to choose an enterprise, and key factors to choose a company within the period from 1992 until 2012. Ogawa (2016) made a qualitative survey on working image and significance of working in case of thinking career design, and asserted the importance of nurturing a view of work or occupation by college students in career education at university. Takahashi (2018) had an objective overview of empirical research targeting the process of job-hunting activities by university students, reported their behaviors, and discussed possible prospects in the future. Thirdly, the survey conducted by a private organization included the results of the report on job-hunting search by Employment Advance Research Center (2018). Moreover, Minavi Corporation (2018) that is engaged in staffing services or placement services has continuously implemented a survey on employment awareness by college students on a yearly base since 1978, and the survey target in recent years is also the largest scale with more than 10,000 people across the country. In the question contents of this research, the researcher adopted some of the question items were used in the above survey as it is in the context of the reliability and validity.

Finally, with regard to the investigation on career choice by Thai university students, Mizukami (2005) statistically analyzed such variables as desired starting salary, desired employment place, desired occupation, things to expect for employment, etc. by using close-ended questions and text open-ended questions for 242 students at national and private universities in Bangkok. Although it is different from academic research, *Info Biz Thailand* by Nippon Info B Co., Ltd. (2017a; 2017b), an informational magazine that issued in Thailand included articles on the investigation results on the top 100 enterprises which Thai students hoped to work for and tabulation results by gender, by humanities course or science course and by reasons to choose the company, and summarized the analytical results and background discussions. As a side note, the top 4 positions were dominated by good salary and special treatment such as bonus, large-scale corporation, famous one and stable one in the reasons to choose a company, and was referred to 44 Japanese firms that Thai students hoped to have work experience as interns. Universum (2018), a consulting company in Sweden, did a survey on popular and preferred company in order to measure corporate value at more than 60 countries all over the world, and put ranking of 100 companies by 23 universities/4,749 students as results from the survey in Thailand on the website.

4. OBJECTIVE

The main objective of this small-scale classroom research was to clarify the sense of values or the way of thinking with regard to finding employment by the students majoring in Business Japanese at SPU; a view of finding employment, and was also to illuminate by what kind of reasons they chose a company with job-hunting process before and after graduation in mind; the reasons to choose a company when they start job-seeking. In addition to this, another objective was to obtain valuable indication or reference data on discussing and improving the quality of career education

through work-related advanced subjects in the curriculum of the Business Japanese major course and the instructional contents or the teaching methods of internship program in the industry-academia collaborative education.

5. METHODOLOGY

5.1 TARGET GROUP

The target group in this classroom research consisted of third-year students enrolled at the Department of Japanese for Business Communication, SPU in the academic year of 2016. There were 21 students (4 males: 19.0% and 17 females; 81.0%; rounded to one decimal place, hereinafter the same shall apply), who registered under *JBC332 Japanese for Management* (3 credits) in the first academic semester of 2018 (August - December, 2018).

5.2 INSTRUMENT

This research implied using a questionnaire method adopted closed-ended questions type with two questions in Thai language. The two questions were designed by multiple-choice questions. The first question had multiple responses with an option to choose one and more answers from 8 choices, and the second question included limited-multiple responses with only two answers from 20 items.

5.3 DATA COLLECTION

The questionnaire was distributed among 20 students, who attended the classes of *JBC332 Japanese for Management* on September 25, 2018 in the first semester of the 2018 academic year (1 absentee). It took about 10 minutes to answer the two questions. The valid respondents were 20 students (4 male students: 20.0% and 16 female students: 80.0%), thus, the percentage of valid responses was 100.0% without invalid answers. The Cronbach's coefficient alpha was 0.99 in the first question and 0.81 in the second question from descriptive statistics (Casio Computer Co., Ltd.).

5.4 DATA ANALYSIS

Although it was analyzed by the respondents' behaviors in the questionnaire, the number of choices answered by the respondents in total was 99 answers in the first question as shown in Table 1. The standard deviation (*SD*) was 1.67, as shown in Table 1. The content of each item is provided in Table 3.

Table 1. The number of respondents' answers in the first question

No. of Answers	1	2	3	4	5	6	7	8	Total 99
No. of Respondents	0	1	3	6	1	5	3	1	20
Percentage	0.0%	5.0%	15.0%	30.0%	5.0%	25.0%	15.0%	5.0%	100.0%

The 6 respondents chose 4 items (30.0%) and the 5 respondents chose 6 items (25.0%), namely, there were 11 respondents, thus, it was over half of all the respondents (55.5%). The average answers by the 20 respondents was 4.95 per capita. Next, in relation to the breakdown of the two answers chosen from 20 items in the second question by the respondents, there were 14 patterns as given in Table 2. The content of the 20 choices is described in Table 4.

Table 2. The breakdown of the two answers chosen from the 20 choices in the second question

Pattern	Item No.	Respondent (%)	8	2 & 3	1 (5.0%)
1	1 & 3	3 (15.0%)	9	2 & 11	1 (5.0%)
2	1 & 4	1 (5.0%)	10	2 & 20	1 (5.0%)
3	1 & 7	1 (5.0%)	11	3 & 12	1 (5.0%)
4	1 & 9	3 (15.0%)	12	3 & 15	1 (5.0%)
5	1 & 10	1 (5.0%)	13	3 & 18	1 (5.0%)
6	1 & 12	3 (15.0%)	14	10 & 13	1 (5.0%)
7	1 & 14	1 (5.0%)	Total	20	20 (100.0%)

Whereas the number of chosen items was 14 in all, i.e. item No. 1, 2, 3, 4, 7, 9, 10, 11, 12, 13, 14, 15, 18, and 20, respectively, the number of no-chosen items was 6 in all, i.e. item No. 5, 6, 8, 16, 17, and 19, respectively. The standard deviation (*SD*) was 0.85, as shown in Table 2. The most patterns were item No. 1 & 3, No. 1 & 9, and No. 1 & 12, and the number of the respondents was 3 respondents (15.0%) in each pattern respectively. All of the remaining 11 patterns were the respondents with only 1 person (5.0%).

6. FINDINGS

6.1 VIEW OF FINDING EMPLOYMENT BY RESPONDENTS

The aggregate results of the answers in the first question are shown in Table 3. The percentage figures in the Table contained numerical values divided by the number of answers of each item in all of the 20 respondents. The standard deviation (*SD*) was 5.73 in Table 3.

Table 3. The aggregate result of 20 respondents in the first question

Item	Content	No.	%	5	I would like to work with pride	15	75.0
1	It is sufficient only to earn an income	17	85.0	6	I would like to do the work that will help people	8	40.0
2	I want to work happily	19	95.0	7	I want to advance in my career	3	15.0
3	I want to work for my own dream	17	85.0	8	I want to contribute to the society	7	35.0
4	I want to balance between personal life and work	13	65.0		Total answers	99	

Although the differences among items were visible in ratio, all the 8 items were chosen regarding a view of finding employment. Of these, more than 80% of items was item No. 2; *enjoyment* (95.0%), item No. 1; *income* (85.0%) or item No. 3 *one's dream* (85.0%), and item No. 5 *working with pride* (75.0%) in order from the high thing of the items. Working was interpreted as personal satisfaction from item No. 2 and No. 5, the concept of labor was accepted as livelihoods from item No. 1, and a view on a work was perceived as a means of self-fulfillment from item No. 3. At any rate, it found that there was a diversity of consciousness or attitudes towards the purpose or significance of working. It might be said that a view of finding employment was, more or less, combined with these different attitudes in actuality. These results reflected intrinsic values for individuals, but then, as shown in item No. 4; *balance between personal life and work*, it showed a tendency of separating personal life and work by more than half 65.0%. With regard to a job as an extension of everyday life or as a part of daily life, the difference of employment consciousness by the respondents at the base was observed. From item No. 6; *work with benefit to people* and No. 8; *contributing for society* were 40.0% and 35.0% respectively, it is certain that finding employment exists for oneself, not for anyone else or the society. However, item No. 7; *career advancement-minded and willing* was extremely small at 15.0%. Even though a low interest in the motivation of career path or career development for the future, or a low interest in the way of promotion was observed, it is anticipated that a long-range career vision is lacked in the notion of finding employment.

6.2 REASONS TO CHOOSE COMPANY BY RESPONDENTS

The tabulated results of the answers in the second question are shown in Table 4. The standard deviation (*SD*) was 3.11 in the Table. There were 20 choices in the second question, however, the items which were not chosen were 6 items, i.e. item No. 5, No. 6, No. 8, No. 16, No. 17, and No. 19. The chosen items were listed in order of the percentage as follows. Item No. 1 (32.5%), No. 3 (17.5%), No. 12 (10.0%), No. 2 or No. 9 (7.5%, respectively), No. 10 (5.0%), and No. 4, No. 7, No. 11, No. 13, No. 14, No. 15, No. 18 or No. 20 (2.5%, respectively).

Table 4. The tabulated results of 20 respondents in the second question

Item	Content	No.	%	11	A company that can make use of its own capacities or expertise	1	2.5
1	A company that is stable	13	32.5	12	Companies without university or gender discrimination	4	10.0
2	A company that is likely to grow from now	3	7.5	13	A company where young people can be active	1	2.5
3	A company with a good salary	7	17.5	14	Companies that have diversified their business	1	2.5
4	A company where I can do the work (occupation) I want to do	1	2.5	15	A company with a good workplace	1	2.5
5	A famous company	0	0.0	16	A company where I want to work	0	0.0
6	Companies with many holidays	0	0.0	17	A familiar company	0	0.0
7	A company with a work system and good welfare benefits such as housing subsidies, etc.	1	2.5	18	Companies with a good corporate culture	1	2.5
8	Companies without company transfer	0	0.0	19	A company where I can continue work until retirement	0	0.0
9	A company enabling me to be active overseas	3	7.5	20	Companies with a well-equipped training system	1	2.5
10	A company that can experience various kinds of occupations	2	5.0		Total answers	40	100.0

It was, of course, obvious of prioritizing working conditions like item No. 1; *stability* (32.5%) and No. 3; *salary* (17.5%) in terms of key words in Table 4. On the other hand, it was found that the respondents did not adhere to *famous and familiar company* at all as shown in item No. 5 (0.0%) and No. 17 (0.0%). It was thought that companies were not chosen for external reasons. Besides that, item No. 16; *preferred industries* (0.0%) and No. 19; *enabling to work until retirement* (0.0%) were not chosen, thus, it was not definitive criterion to decide to choose a firm. Conversely, in spite of a small number of respondents, it was seen to make consideration of working environment as item No. 12; *non-discriminatory* (10.0%), No. 15; *good workplace* (2.5%) and No. 18; *corporate culture* (2.5%) rather than company itself. There was also a trend that indicated active intention such as item No. 2; *Company that is likely to grow* (7.5%), No. 9; *be active overseas* (7.5%), No. 10; *enabling to experience various kinds of jobs* (5.0%), No. 4; *the work that wants to do* (2.5%), No. 11; *enabling to make use of own capacities or expertise* (2.5%), No. 13; *young employees can be active* (2.5%), No. 20; *well-equipped training system* (2.5%), and No. 8; *no company transfer* (0.0%), or *accepting company transfer* (in the meaning that no one chose). From these 8 items, the respondents somewhat placed importance on personal and professional growth. In other words, it was apparent that a few

respondents sought for a company that was possible to challenge in career development. In that sense, it could be said that the reasons of choosing a company indicated the expectations of that company.

6.3 RELEVANCE OF 6.1 AND 6.2

When compared to the reasons for choosing a company in the second question (Table 4) as the axis of item No. 1, No. 2, No. 3, and No. 5 accounted for over about 80% in the first question (Table 3), there were two features. One was a type of thinking about the reasons for a company choice with a priority given to one's own attitudes or awareness of occupation as shown in the responses from items No. 1, No. 3, No. 4, No. 7, No. 11, No. 12, No. 15, and No. 18 in the second question. The other one considered management activities and managerial conditions of companies in connection with the answers from items No. 2, No. 9, No. 10, No. 13, No. 14, and No. 20 in the second question. These two types were perceived as the results based on the criteria of personal choice or social choice in the context of the reasons for a company choice affected by a view of finding employment. In fact, however, it was thought that the relevance resulted from a combination of factors.

7. CONCLUSION AND SUGESTIONS

As an overall conclusion, there is a trend to choose a company providing one's current satisfaction degree or one's sense of accomplishment, not external reasons, by a view of finding employment based on personal preferences focusing on labor conditions or workplace environments. On the other hand, somewhat positive attitudes oriented to self-fulfillment were observed in connection with the reasons for choosing a company. As a technical problem, this research did not design the columns of *Other* in both questions and ask for relative ranking with value scales. Moreover, in the second question, it was insufficient to analyze the reasons for a company choice, from various perspectives in multiple-choice questions limited only to two answers. Therefore, it could not be referred to individuals or detailed features in this paper. Additionally, further discussions were still needed on the relevance between a view of finding employment and the reasons to choose a company. However, on the basis of the precious conclusion obtained from the analysis and discussions in this small-scale classroom research and by providing feedback of research results to the students, it is expected, in the future, 1) to enhance the contents of career education through the career-related course subjects in the curriculum, and 2) to provide appropriate advice and guidance in each subject and for each of grades 2-4 in order to lead to a set of the processes from internship until job-hunting activities before and after graduation, and moreover, the step-by-step process from career vision towards career development with keeping future viewpoints and long-term perspectives in mind.

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WASTES MANAGEMENT IN CHATUCHAK WEEKEND MARKET BANGKOK USING THE PRINCIPLES OF FACILITY MANAGEMENT WITH SPATIAL DATA.

MONNAPATT SIKHAO

Faculty of Humanities and Social Science Phranakhon Rajabhat University

E-mail: monnapatt@gmail.com

PIAMCHAN DOUNGMANEE

Faculty of Industrial Technology Suan Sunandha Rajabhat University

E-mail: piamchan@yahoo.com

ABSTRACT

Wastes Management in Chatuchak Weekend Market, Bangkok. Using the Principles of Facility Management with Spatial. The purpose of this study is to study the information of waste management system in Chatuchak market. Bangkok The application of the principles of Facility Management and spatial data t to the information and application of waste management in Chatuchak Weekend Market. When entering the area, there is a lot of waste. Placements and the number of containers within the Chatuchak market are unsuitable, such as leaks, spills, trash overflowing to the time that the garbage collector will store for a long time, etc. That need to be managed. It is an important source of tourists both Thai and foreigners. The management approach is to apply the Facility Management Principles in combination with Spatial Data, The results, in addition to observations and general interviews, will provide information on planning. Management and decision support are stored in a database. It can be used for other related tasks. When the site manager is aware of all the information related to waste management in all areas. The Jatujak Market, which is a large market, can be effectively managed. Problem solved. In addition, the strategies of the campaign can be proposed to the stakeholders in Chatuchak Market to participate in appropriate management.

KEYWORDS: Wastes Management, Chatuchak Weekend Market, Facility Management, Spatial Data

1. Introduction

The problem of wastes in big flea market like Chatuchak market. The impact comes in many respects. The concept of waste management in a large area, with the application and integration of various sciences to solve the problem in a comprehensive and systematic way.

Access to Chatuchak Weekend Market Visible garbage in almost all areas outside and in the in. The current problem of junk market is too garbage, the container is filled with rubbish everywhere, there are insufficient garbage bins for all garbage collected within Chatuchak Market And the waste management at Chatuchak market is still not able to control cleanliness in the Chatuchak market. It causes a foul smell of garbage. Especially the area where the amount of rubbish is overflowing out of the bin. The problem. It is related to waste such as expenses, etc. Waste Management Concepts Chatuchak Weekend Market Bangkok Using Facility Management Principles. The focus is on 3s: User, Space/Area and the processes/ activities in the area are perfectly connected. With Spatial Data, which is information that has a dimension, position and appearance. (Keaw Nualchawee, n.d.) that to be used as planning information. Management and decision-making in addition to information collected from general surveys. The database is stored. Even shopping habits and waste disposal at various areas. That is all kinds of information. All levels must be stored in the form of spatial data that allows the user to view the area in relation to each layer. Chatuchak Weekend Market can be used as a resource for dealing with solid waste. This is important for effective waste management. Participation As a way to reduce the problem of waste, residue, garbage and waste in Chatuchak Weekend Market in the target for users and office Chatuchak Market.

2. Objectives

- (1) To study the information of waste management system in Chatuchak market. Bangkok
- (2) To apply the principles of Facility Management and Spatial data as information and application in waste management planning in Chatuchak Market.

3. Waste Management System in Chatuchak Weekend Market Bangkok

3.1 Basic Information and Daily Activities in Chatuchak Weekend Market Bangkok

Activities in Chatuchak Weekend Market In the market there are activities by product categories: Wednesday and Thursday as a tree market. Friday is a fresh set of ceramic. Saturday and Sunday is a diverse market. (From Chatuchak Market Chat) as shown in Table 1.

Table 1 shows the activities in Chatuchak Weekend Market.

day	Market Categories	Service time	Number of vendors in the market (person)	tourist (person)	Waste quantity (kg.)
Monday	-	-	-	-	-
Tuesday	-	-	-	-	-
Wednesday	Treehouse	05:00 am. – 06:00 pm.	100	200	70 kg.
Thursday	Treehouse	05:00 – 18:00 น.	100	200	70 kg.
Friday	Ceramic Market	08:00 – 21:00 น.	8,000	300	100 kg.
Saturday	Flea market	08:00 – 21:00 น.	8,000	50,000 – 100,000	300 - 400 kg.
Sunday	Flea market	08:00 – 21:00 น.	8,000	50,000 – 100,000	300 - 400 kg.

3.2 Waste Management System in Chatuchak Weekend Market Bangkok

(1) Garbage collection time (Daytime) Saturday and Sunday.

Round 1 09:00 am. - 10.00 am.

Round 2 11:00 am. - 12.00 am.

Round 3 00:00 pm. - 02:00 pm.

Round 4 03:00 pm. - 04:00 pm.

Round 5 05:00 pm. - 06.00 pm.

(2) Accommodation Garbage dumps and waste collection routes. (Daytime)

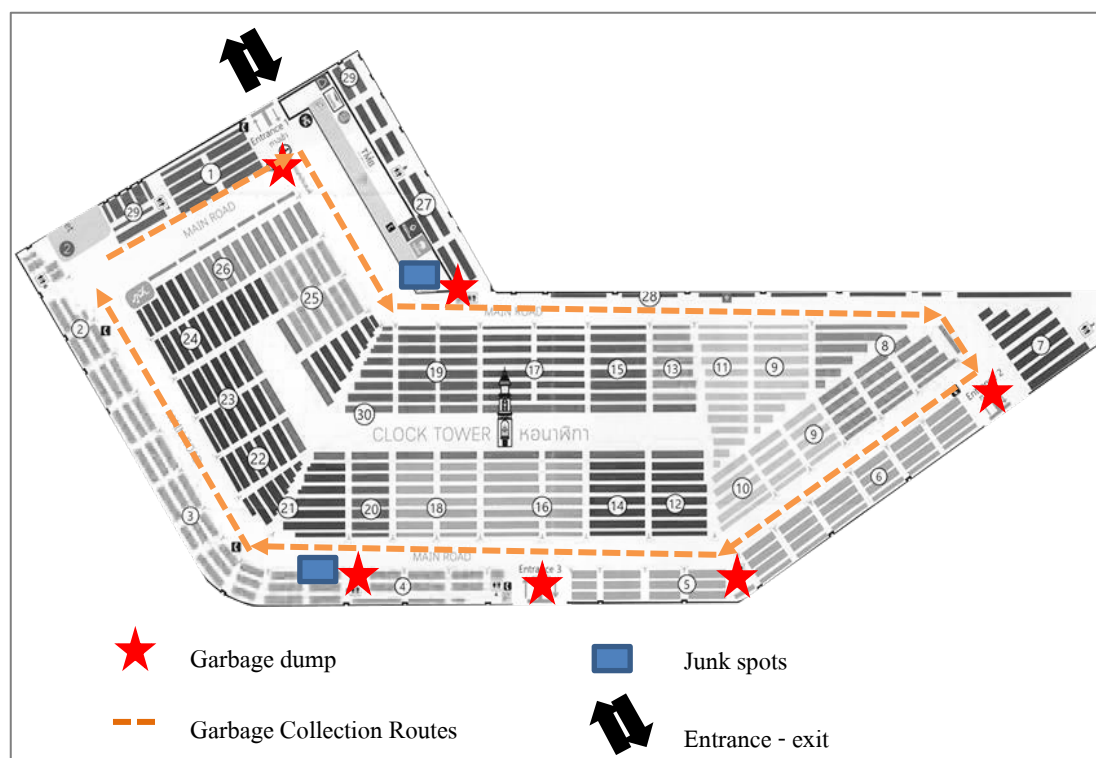


Figure 1 Paths and dump points (Daytime)

General comments on waste management in the daytime. Accommodation included garbage. There are only two spots in the two bathrooms, causing a lot of problems. This is a waste incinerator that does not meet the standard for liquid leakage and overproduction of solid waste. As prescribed by law There are problems with the smell of tourists disturbing walking within the Chatuchak market. There are only 5 spots of garbage disposals, which are not enough for the daily amount of solid waste and no sorting of waste.

(3) Garbage collection time (At night) on both Saturday and Sunday.

Round 1 10:00 pm. - 11.00 pm.

Round 2 11:00 pm. - 12.00 pm.

Round 3 00:00 am. - 01.00 am.

(4) Accommodation Garbage dumps and waste collection routes (Nighttime)

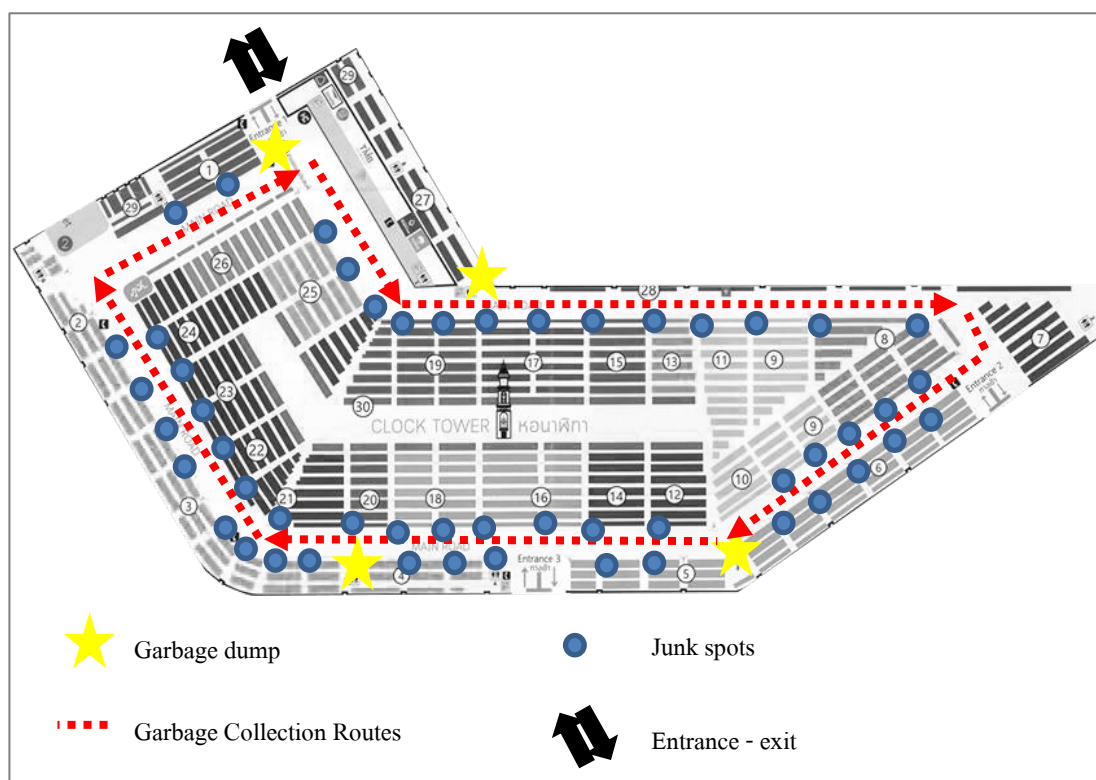


Figure 2 Paths and dump points (Nighttime)

4. Applying the principles of Facility Management and spatial data in waste management planning.

4.1 Principle of Facility Management and Spatial Data Management

Bundit Chulasai and Sarich Chotipanich (2004, p 10) Theoretical and practical aspects of facility management, which are in line with the conclusions of Nantana Uthamaphethai, Parinya Chareonbhandhit and Akkatak Siangamphai. (2010, p 16) that FM is 3-way management or 3P includes People Place Process. Building

use and demand in modern buildings interact with workers and buildings, according to Bundit Chulasai and Sarich Chotipanich (2004, p 11) that is based on the relationship of three components: people and buildings. As follows:

(1) People mean people who use the building, including employees who come to the business. To be satisfied with the place. And the results are valuable. Effective for the organization. For growth Constant in their work life.

(2) Process means a business activity or transaction that takes place within a building. To use the building both in time and outside normal working hours. To get the right result. There are also special events. And involves the public and private sectors.

(3) Place means a building, a work area, an environment and office space. It must have a bright atmosphere, clean work, light and proper temperature. Indoor use is fast. Effective Be safe The service is good and standard quality.

The need for building management, such as provision, provision, operation and control of the work to meet the objectives. It is a workload with specific details. Lots of work If these operations are lacking in good planning and management, then all operations can be redundant and ineffective. Or sometimes conflicts between them. (Sarich Chotipanich. 2010, p 5-6) The principle of Facility Management is to manage both the building and the physical environment of the building. The goal is to achieve the activities. Effectively and qualitatively, under the proper use of resources. To provide value and satisfaction to users and administrators. (Monnapatt Sikhao, 2016)

Facility management is not limited to the physical characteristics. Physical form of the building only. But in the ability to meet the area and facilities in the building. To meet the needs of users in a systematic and effective. The building system and services. Support for effective use. (Bundit Chulasai and Sarich Chotipanich, 2004, p 12) and (Sarich Chotipanich. 2010, p 12) According to The buildings are not only found in high-rise buildings and large buildings. Generally, there are also small buildings that are not specifically extended. But the expansion in the horizontal, such as the housing, warehouses, business units. All of them need to facilities management, both within and outside the premises, to support the organization's activities, with good location management. System of care and maintenance. Have an environment, internal facilities. Service is available, etc. (Monnapatt Sikhao, 2018, p 218-219)

The spatial data is the data that has a positional dimension. Displayed in the form of points, lines and areas used in various types of work such as tax mapping. Monitoring and monitoring changes in natural resources and environment. Planning to track agricultural output to balance exports or domestic consumption. Spatial data is an important factor for planning and management in many areas for all sectors. (Keaw Nualchawee, n.d.)

The use of spatial data can provide both image and location management information. Spatial correlations and application to model spatial systems by geographic information systems. It is used to collect and manage spatial data and related information for presentations. Demonstration, including analysis. (Wade,T.&Sommer,S, 2001) and the spatial data is processed by a geographic information system. When collecting accurate, accurate data stored in spatial data format GIS is a precision processing tool. The results are

used to help decide. And planning is a model of waste management in various ways. The integrated building management principles used to analyze the area. Space user And processes / activities The planning and strategy of waste management in Chatuchak, appropriately.

4.2 Waste Management Planning in Chatuchak Weekend Market

(1) Management planning

- 1) It should be time to collect garbage for the shops.
- 2) Some budgets should be allocated to purchase garbage. And cleaning equipment
- 3) It should increase the cycle or time of garbage collection. To support solid waste in large areas.

(2) Campaign planning

- 1) Campaign for users (Traders and buyers) in the market.

(a) If any customer bring the original glass of the store bought earlier. Rebate may have a discount on the next purchase price of water.

(b) If a customer brings a bag of cloth used to put goods or goods, there may be a discount on the goods that customers will buy.

(3) Campaign process

- 1) Clarification of staff and vendors in the Chatuchak market to know the campaign.
- 2) Establish a working group. To set up a project team.
- 3) Assign mission To assign duties to staff.
- 4) Public relations to clarify waste separation activities.
- 5) Coordinate and benefit with vendors.
- 6) Evaluation

(4) Planning how to sort the collection method, how to handle solid waste within the Chatuchak market.

1) Placing all types of waste bins. In Chatuchak Weekend Market There should be a solid waste bin at each point in every color or all categories. There should be at least 3 garbage containers at each point, ie common waste, recyclable waste and degradable waste. To separate the waste before disposing. And easy to remove. Improve the garbage dump from 6 points to 2 more points at the center of the clock tower should have a dump point so that the amount of waste is not overflowing.

2) The color of all trash can easily be disposed of. In Chatuchak Weekend Market The layout of trash should be in all colors and all types.

3) Modification of the garbage disposal sub There should be a change in the size of the garbage small size to a large and cover without leak or smelly smell to tourists who use the service within the Chatuchak market.

(5) Management planning

- 1) It should be time and inform the shop how to dispose of garbage at the point of dumping.

2) Some budgets should be allocated for purchasing waste collection equipment. And cleaning equipment

3) It should increase the cycle or time of garbage collection. To support solid waste in large areas.

4.3 Adjust Cycle time Accommodation Dumps and junk spots in Chatuchak Weekend Market

(1) Adjusting the time in the garbage collection.

The garbage collection time should be adjusted faster to accommodate the large amount of solid waste. The garbage can be collected in the afternoon and evening to suit the tourists who come to Chatuchak Market, such as the 2nd round of waste collection. There are more tourists to waste in the jar market. Both of Daytime and night periods (the time before noon, the amount of waste is not much.) are shown in Table 2 and 3. Table 2 compares the garbage collection interval between Saturday and Sunday morning (daytime), the original time and the new adjustment time.

Round	Time cycle (existing)	Time cycle (Adjust)
1	09:00 am. - 10.00 am.	09:00 am. - 10.00 am.
2	11:00 am. - 12:00 am.	01:00 pm. - 02:00 pm.
3	01:00 pm. - 02:00 pm.	03:00 pm. - 04:00 pm.
4	03:00 pm. - 04.00 pm.	05:00 pm. - 06.00 pm.
5	05:00 pm. - 06.00 pm.	07:00 pm. - 08.00 pm.

Table 3 compares the waste collection time between Saturday and Sunday morning (night time), the original time and the new adjustment time.

Round	Time cycle (existing)	Time cycle (Adjust)
1	10:00 pm. - 11.00 pm.	08:00 pm. - 09.00 pm.
2	11:00 pm. - 12.00 pm.	10:00 pm. - 11.00 pm.
3	00:00 am. - 01.00 am.	00:00 am. - 01.00 am.

(2) Adjustment of Garbage dump and junk spots

Increased garbage dumps in Chatuchak Market from 6 points to 8 points and Junk spots at 1 point, as well as improved the layout of garbage cans in order to sort out the garbage in Chatuchak. As shown in Figure 3, to handle solid waste within the Chatuchak market. Enough with the amount of waste, especially in areas with heavy users.

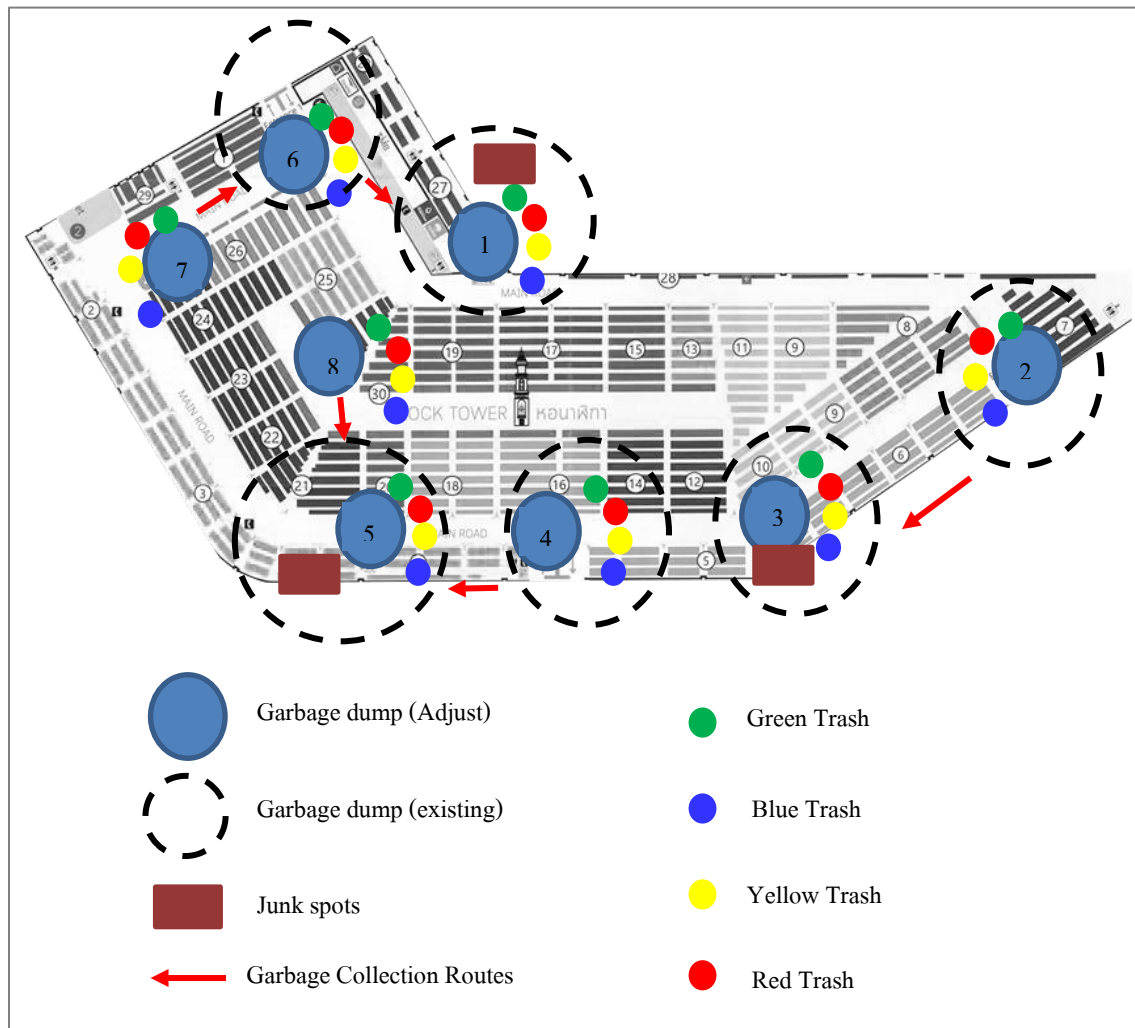


Figure 3 Waste Disposal Point and Trash Placement (Day and night)

5. Conclusion

Every Saturday and Sunday Chatuchak market has about 50 tons of waste per user per day. There are only garbage bins at each dump point within the area. There is an overflow of rubbish outside the tank. Chatuchak Weekend Market has garbage collection procedures. By using a solid waste collection truck, there is no standard covering of garbage collection trucks. At the point where the garbage can be placed at the point where the waste is collected, leakage of the liquid causes a foul smell. Removal of waste outside the area is the responsibility of the private company responsible for the waste to be disposed of, but stored and collected.

Applying principles of Facility Management and spatial data to data and application in waste management planning in Chatuchak market. It is possible to plan the waste management in the Chatuchak market, which is a large market. Problem solved. In addition, the strategies of the campaign can be proposed to the stakeholders in Chatuchak Market to participate in appropriate management. The waste management plan in

Chatuchak market should consist of Management planning Campaign planning for space users In the market, planning on how to sort the collection method, including how to adjust the time in the garbage collection. In addition, garbage and garbage disposal in Chatuchak market is sufficient to meet the volume of waste, especially in areas with dense users, to be consistent with actual data collected.

6. Suggestion

6.1 Study of spatial data. there are issues that should be learned. In particular, the layers and data management used to analyze forecasts. This will show a clearer model. This is useful for accurate planning or forecasting.

6.2 Study of user behavior in conjunction with in-depth shopping area provision in terms of activity and consumption. It is based on the principle of Facility Management (3P) that can be designed to be saved in the database format. In addition to helping to plan effective waste management. It also helps in other areas, such as health and safety.

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COMMUNICATING BRAND IDENTITY TO VIETNAMESE AUDIENCES VIA CELEBRITY ENDORSEMENT: A CASE STUDY OF OPPO

Nguyen Le Phuong Quynh

Communication Arts/ Graduated School, Bangkok University

E-mail: nguyen.quyn@bumail.net

Advisor: Ratanasuda Punnahitanond

Communication Arts/ Graduated School, Bangkok University

E-mail: ratanasuda.p@bu.ac.th

ABSTRACT

The research aimed to examine how the mobile phone brand, OPPO, communicated its brand identity to Vietnamese audiences via celebrity endorsement. Samples were selected from the OPPO's advertisements broadcasted on television and digital platforms in Vietnam from the beginning of 2015 to the end of 2017. Using the Brand Identity Prism (Kapferer, 2008) as a theoretical framework, textual analysis of 22 OPPO advertisements was conducted to investigate how the OPPO brand was communicated in terms of six elements of the Brand Identity Prism. The textual analysis results reveal that OPPO had used celebrity endorsement in most advertisements to communicate its brand identity to Vietnamese audience on both digital and traditional platform, and that each of the sampled advertisements contained one to three brand identity elements. The emphasis was on physique, personality and self-image. Both academic and managerial implications were provided for communication scholars and brand managers.

KEYWORDS: OPPO, Vietnamese audiences, Communication platform, Brand identity, Celebrity endorsement

1. Introduction

In recent years, brands have focused on building a more personal brand to communicate their message to customers more easily and more closely. By creating brand concepts such as logos, slogans, brand formats, applications consistently, customers can easily identify with the brand. Brands are among the most important intangible assets possessed by firms, contributing to greater value and market success (Sääksjärvi Maria & Saeed Samiee, 2011). The goal of the brand identity system is not only to raise awareness, distinction, to express the individuality of the company, but also to influence the perception and sense of size of the business. To have a successful advertising campaign, there must be an integration of tools, content, and media. Each communication platform has different effects with different target audiences.

Once brand identity is identified as the message of the brand and communication platforms to reach customers easily, celebrity endorsement is one of the best solutions for brands in marketing communication. Celebrities are people who enjoy public recognition by a large share of a certain group of people whereas attributes like attractiveness, extraordinary lifestyle are just examples, and specific common characteristics cannot be observed though it can be said that within a corresponding social group, celebrities generally differ from the social norm and enjoy a high degree of public awareness (Schlecht, 2003). In addition to associating new fans with existing branded products, a well-known celebrity face can collaborate with a business to create new products and services with the "brand ambassador," a trend prevailing recently.

In 2013, the OPPO mobile company entered the Vietnamese market with the first products. At that time, there were five major companies -- Samsung, Nokia, BlackBerry, Sony, and LG in Vietnam market, which distribute their products directly whereas Apple distributes through its agents. Although OPPO in Vietnam is a small mobile company with the mid-range phones, compared with the "big" in the smartphone industry such as Samsung, OPPO's positioning is very unique, "Selfie Expert."

Brand Identity

Brand identity is defined as what consumers receive from a brand that can be tangible or intangible. Several researchers such as Aaker and Joachimsthaler (2000), de Chernatony (2001) and Kapferer (2004) have suggested many models to define brand identity; including three elements such as brand personality, brand culture and relationship. According to Kapferer's (2004) study, identity derives from the brand's core values, benefits and legacy; and describes brand's tangible and intangible facets – everything that makes the brand different and unique to the customers. Through brand identity, a company seeks to convey its product or service uniqueness to all its relevant consumers. The importance of the conception and its understanding is quickly disseminated in the entire world. Kapferer's Brand Identity Prism model (2004) works as a potential mechanism for brand managers to gauge the identity of any brand. This may be useful for marketing executives and brand managers since they should be aware of the importance of building brand identity for their brand. Today, marketers need to understand current socio-economic situations to have a clear plan for their brand to avoid confusion among customers.

Kapferer's Brand Identity Prism (2004) helps businesses build strong, enduring brand identities that reflect their core values. This model identifies 6 dimensions of brand identity: physique, personality, culture, relationship, reflection and self-image.

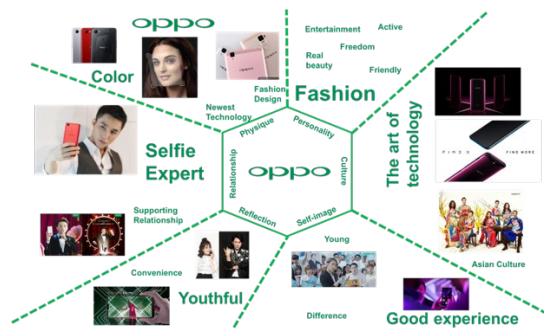


Figure 1: OPPO's Brand Identity Prism

Communication Platforms

Digital marketing channel is a new digital media channel that creates an integrated communications process through which companies can capture feedback from customers and build a deeper relationship with them. Digital marketing channel is two-way communication channel. There are many platforms such as website, social media, social network, etc. Social media has brought revolutionary new ways of interacting, participating, cooperating and collaborating (Bruhn, Schoenmueller & Schafer 2012)

Television is traditional platform in marketing communication. It has greater coverage than digital channels. However, it is merely one-way communication channel. Television is also known as "king" in advertising media. Although nowadays with digital development marketers have no longer focused on TV as much as before, TV advertising effectiveness is still very high.

2. Research Objective

This study aims to achieve the following specific objectives:

- 1) To examine how celebrity has been used by OPPO to communicate six elements in brand identity prism to Vietnamese audiences.
- 2) To investigate communication platforms that have been used by OPPO brand to communicate its brand identity to Vietnamese audiences.

3. Conceptual Framework

The conceptual framework is based on the identification of key concepts and the relationships among those variables. This framework includes two main constructs that are OPPO celebrity endorsement and brand identity. OPPO's brand identity and concepts of OPPO celebrity endorsement of a research can be visually represented in Figure 2 based on the Brand Identity Prism (Kapferer, 2008).

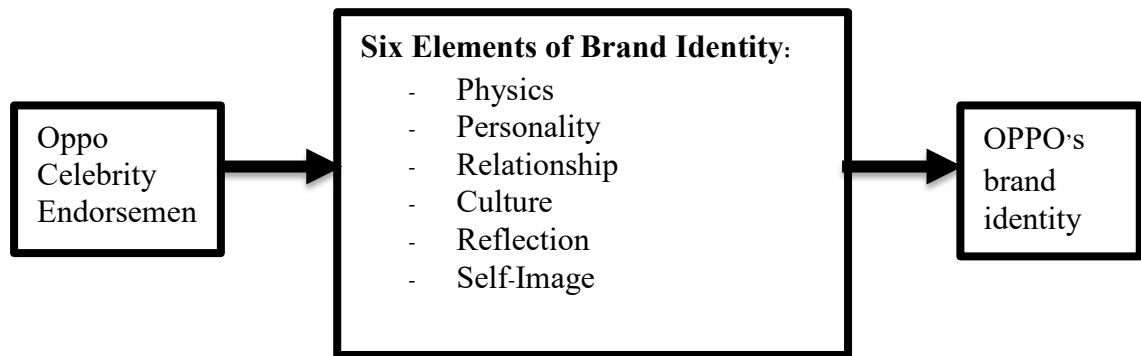


Figure 2: Conceptual Framework

Research Questions

This study is designed to answer the following two research questions:

Research Question #1: How does OPPO use celebrity endorsement to communicate its brand identity?

Research Question # 1.1: How does OPPO use celebrity endorsement to communicate its brand identity in terms of physique?

Research Question # 1.2: How does OPPO use celebrity endorsement to communicate its brand identity in terms of personality?

Research Question # 1.3: How does OPPO use celebrity endorsement to communicate its brand identity in terms of relationship?

Research Question # 1.4: How does OPPO use celebrity endorsement to communicate its brand identity in terms of culture?

Research Question # 1.5: How does OPPO use celebrity endorsement to communicate its brand identity in terms of reflection?

Research Question # 1.6: How does OPPO use celebrity endorsement to communicate its brand identity in terms of self-image?

Research Question # 2: What communication platforms have been used by OPPO to communicate its brand identity to Vietnamese audiences?

4. Research Methodology

4.1 Research Design

This study aims to demonstrate how OPPO communicates its six brand elements to Vietnamese target consumers in TVCs using celebrity endorsements. This study focuses on analyzing the OPPO's brand identity based on the Brand Identity Prism. The findings of analysis were obtained by textually analyzing the sampled TVCs.

This research applies a qualitative research approach by using the textual analysis to analyze samples of OPPO's TVCs in order to identify how OPPO used celebrity endorsements via television and social media advertisements to communicate its brand identity to Vietnamese audiences. The qualitative approach was chosen because this approach allows an interaction between theory and evidence and provides a deeper understanding and the ability to explore topics in more detail. The qualitative method provides OPPO brand and readers with detailed information on how to use celebrities in TVCs by analyzing the elements of 22 TVCs. In addition, textual analysis richly describes the content, structure and functions of the messages contained in texts.

4.2 Population and Sample

The study covered a period of three years (2015-2017). The selected periods are anchored on the fact that the OPPO has started to be known to many consumers in Vietnam and the brand has presented itself as a wide range of high quality, with the use of explosive advertising on both traditional and digital platforms. The length of OPPO's TVC are 30 seconds and 60 seconds while that of viral clips are 90 seconds, and more than 3 minutes. The sample advertisements must have the appearance of celebrity endorsers.

4.3 Variable

To ensure reliability of the study, 30 percent (6 ads) of the total 22 samples on two platforms were textually analyzed by the major investigator and the second coder who is working in the digital agency in San Francisco. As an expert in advertising, she has knowledge and ability to serve as the second coder. The inter-coder reliability is 85 percent. To ensure the validity of the study, a textual analysis of the sampled advertisements was conducted based on the Brand Identity Prism (Kapferer, 2008).

4.4 Data Collection

Data were collected to examine 22 OPPO's advertisements and VDO clips in Vietnam from 2015 to 2017. Each sample includes OPPO's brand identity element and celebrity who endorses the OPPO brand.

4.5 Data Analysis

As this study used a qualitative approach, there is no concrete measurement. The secondary data (22 OPPO ads on television and digital platform) were sampled and textually analyzed in the following steps:

- Analysis of the six elements of OPPO's brand identity appeared in the sampled advertisements through the following forms:
 - Text in video:
 - Text in beginning of video often supports for content.
 - Text in the last half of the video often introduces new functions.
 - Image in video:
 - Image in video shows the story of the message that the brand wants to communicate to consumers.

- The end of the video is the image of the mobile phone so that consumers see the shape of its product.
- Background music and ambient sound:
 - Background music is an important element which helps audiences understand context and stimulate their emotion.
 - Ambient sound is usually the sound of phone function or the sound of characters so that the story is presented honestly.
- Voice-over: A short oral narrative that helps viewers understand TVCs' content.
- Celebrities as characters in the ads: In TVCs, two elements include main characters (celebrity) and supporting characters. The role of celebrity is solving the problem as a hero or getting into trouble. Supporting characters often get into trouble or support main characters. In other words, they are characters connecting both celebrity and audiences.

5. Research Findings

The following sub-sections report findings from the textual analysis. Table 1 provides a list of research data that were analyzed to identify elements of OPPO's brand identity shown in each of the sampled TVCs. Table 1 provides analytical data identifying the six elements of Brand Identity Prism.

Table 1: Elements of Brand Identity Found in OPPO's Sampled Advertisements

No	Brand Identity	Titles of OPPO Ads
1	Physique Self – image	OPPO F7 – With Son Tung capture true beauty Secret to help Chi Pu always beautiful on Facebook OPPO F3 Plus Camera Selfie Dual - The perfect solution when selfie crowded OPPO F3 Plus Camera Selfie Dual – How one-touch helped Toc Tien difference? OPPO F3 Plus - Camera Selfie Dual One for your own - One for the whole group
3	Self – image Culture Personality	Short film – Negative
6	Personality Culture	Oh my god! My mom selfie Short film 2017 OPPO R5 - Level of design
7	Personality	OPPO F1 Plus - Beauty Spot OPPO Mirror5 - Chi Pu Selfie War

Table 1: Elements of Brand Identity Found in OPPO's Sampled Advertisements

10	Relationship Self - image	OPPO F1s 2017 - Save all the sky
11	Relationship Culture	OPPO F3 - The story of the dual selfie miracle
12	Relationship Physique	OPPO Neo 7 – Elegant and bright
14	Culture	Keep traditional New Year - Modern Lunar New Year 2016
15	Self - image Reflection	“The secret of Son Tung” Viral clip OPPO F3 When girls traveling alone
16	Self - image	OPPO F3 - Camera Selfie Dual Just smile, because shooting group is fun OPPO F1 - Standard design. Camera care beauty
20	Physique Self – image Relationship	OPPO F5 captures true beauty
21	Personality Reflection	Selfie together - Spring Full - Short film
22	Self - image Personality	TVC OPPO F1s - Selfie Expert

As for research question 1.1, by applying the six elements of Brand Identity Prism (Kapferer, 2008) to the OPPO brand identity, it was found that ‘physique element’ is newest - technology - color - fashion design. Physical appearance is the first and foremost of all identifiers and it is an indispensable element of brand identity. There are seven TVCs presenting the physique element.

Based on the data analysis, the results yield the way OPPO brand communicated via celebrity endorsers, which is the story of trouble most users face in the ads and the OPPO phone helps the celebrity endorsers to solve their life's problems. It is easier and they can enjoy life better. Through this message strategy, OPPO introduced the functions of the physique element of the phone to the target audiences in a clear and interesting way. Besides, celebrity endorsers become heroes and use the OPPO phone as a tool to help other characters with OPPO features. Thereby, we see that OPPO is always trying to bring their target audience creativity and interest in communication from the basic elements to the relatively concrete element like ‘physique’ element. They used the image of celebrity endorsers as a bridge who always accompanies OPPO's customers.

As for research question 1.2, the ‘personality’ element of the OPPO brand identity found in the sampled ads include fashion - friendly. Personality element is the internal element of brand identity and it is the soul of the brand.

After analyzing the attributes as text, image, voice-over, music and characters, the personality element was shown by the personality of the celebrity endorsers. Celebrities represent OPPO brand personality through costume and acting. In the videos, celebrities wear fashion clothes and in line with the current trend to embrace the personality of the OPPO brand that is fashionable and modern. The acting in the video showed a friendly personality and the celebrities showed the closeness of each action and how the situation is handled so that the viewer feels the friendliness of the brand.

As for research question 1.3, the 'relationship' element of the OPPO brand identity is selfie-expert and supporting relationship. This is an external element of OPPO's relationship with the target audience, and OPPO has chosen its role in this relationship as a selfie expert to help consumers get the best possible images with its best and smartest technology.

After analyzing the elements of the ads, the OPPO's role as a selfie expert is evident in OPPO F1s and OPPO F5 when OPPO becomes a specialist in solving the problems encountered when selfie is an honest photo and not enough memory to capture selfie. Through this, OPPO would like to emphasize its role as a selfie expert with the target audience. Besides, celebrities act as an OPPO representative to support characters in situations to demonstrate OPPO's support relationship with the users. In addition, celebrities represent friendliness through acting and facial emotion to show closeness between OPPO and its users.

As for research question 1.4, it was found that the 'culture' element is the art of technology and Asian culture. In this context, the OPPO brand has become the art of creating technology. This is one of the cultures that OPPO brings to many different markets. In addition, OPPO has created a system of values, behaviors, principles and characteristics of Asian culture to create a direct connection to the Vietnamese market. Target audiences will only feel connected with the brand if they feel like they "fit in" with the brand culture.

In the ads containing the 'culture' element, there are two viral ads expressing Asian culture through the context of Lunar New Year, which is the largest holiday of Vietnam and this is also the largest festival of the year in most of the eastern countries. Thus, the activities and values of Vietnamese culture in general and Asian culture are very clear. Another characteristic of the 'culture' element is that the art of technology has been featured in OPPO R5 and OPPO F3. OPPO has created an artistic context and situation to convey the message about its features and structure. The shape of the phone is very sophisticated.

As for research question 1.5, the 'reflection' element of the OPPO brand identity is youthful and convenience. Reflection element is one of the external elements of the brand that reflects the image of the brand towards target audiences. Due to this element, OPPO has been trying to create youthfulness and convenience towards the young target audiences so that they feel fit and meet with their expectations.

In general, the OPPO celebrities show the youthful spirit that OPPO desires its audiences to feel. Besides, the messages and content of the TVC are oriented to the dynamic and youthful personality. OPPO is keen to bring consumers multi-functional phones, especially taking pictures for convenience. Endorsers always

express convenience to TVC directly through the use of prominent features and emphasis on the convenience provided by OPPO.

As for research question 1.6, the OPPO brand identity of the 'self-image' element is different, young and good experience. 'Self-image' is the factor that OPPO usually hits the most ads. Self - image element served as a reflective mirror of the target customers that the OPPO brand desires to target. As this is one of the important factors for product purchase and creating memories of the target customers.

This analyses also yield that OPPO extremely focused on delivering various, young and good experiences to the target audience through stories in ads and celebrities serving to play the role, connecting or reflecting the real life of the target audience. For example, in the lives of young people today, they are eager and have the need to share their selfie image to people through social networking and what they need is not only beautiful pictures but real ones. In addition, each OPPO phone delivers the best and most enjoyable experience for consumers. Even while watching OPPO ads, audiences can find themselves having the same experiences through the celebrity endorsement.

As for the second research question, it was found that OPPO has used two main platforms to communicate with Vietnamese audiences: digital and traditional platforms via the Internet and television. In Vietnam, audiences have a preference for watching videos on YouTube, and they have a habit of exchanging and interacting with each other on social media. That is why OPPO can rely on the benefits of digital platform and optimize its brand communication.

On the digital platform, interactivity is a factor that helps customers and brands to become closer through interaction. OPPO understands what its customers want, and vice versa, as well as the opportunity for OPPO to answer customer inquiries. OPPO can integrate multiple social media channels to expand the reach and promote the target audience. On the digital platform, there is no limit for the length of video clip ads, which is a chance for OPPO to offer video clips longer than 60 seconds and more creative for consumers to understand OPPO brand. In addition, there are still difficulties that OPPO faced when choosing digital communication platform. OPPO faced the bad interactions that may or may not be true, but it greatly affected the image and reputation of OPPO on the digital platform because consumers can always expose to such negative ideas.

Recently television has suffered financially when some brands have reduced their advertising activity on television, and turned into a digital platform. However, one thing has remained constant: Television is still by far the most effective advertising medium in Vietnam. That is the reason why OPPO brand still chose television as one of its communication platforms in communication to the Vietnamese audience. Most TV channels in Vietnam have the appearance of OPPO's TVCs at the time of the highest rating which is considered as the effective reach strategy of OPPO. In addition, the OPPO brand understands that television viewers often watch TVCs more passively than they do via digital platform such that they are more likely to make their TVCs more interesting and to deliver more memorable key messages that OPPO wants to transmit.

6. Discussion

Based on the findings presented above, the elements of the Brand Identity Prism by Kapferer (2008) have been effectively applied by OPPO brand in its advertisements. The results show that each TVC contained one to three brand identity elements. Among those factors, three main factors that OPPO emphasized the most include physique, personality and self-image. It is clear that the pair of physique and self-image elements was often used by OPPO to communicate to its consumers. The second important factor, personality element was often chosen by the OPPO for its brand communication, or in combination with self-image, to express the personality and spirit of the brand. Interestingly, three elements -- reflection, relationship, and culture -- were less used by OPPO. This may result from the fact that the physique element is extremely important in consumers' purchase decision for technology-oriented products like smart phone. In addition, OPPO especially wants to communicate to its target audience about the nature and personality of the OPPO brand to create intimacy and to accompany customers as a friend.

In terms of communication platform, the analysis results indicate that OPPO has chosen to communicate with the target audience in Vietnam market mainly via the digital platform. Of the 22 TVCs being sampled, all were distributed on the digital platform and this is the main platform where OPPOs listen to and respond to consumers as well as notice the interaction in OPPO user communities and among other audiences. For television, there are limitations in terms of the duration of the TVCs. Therefore, they cannot deliver all the video clips via this platform and they have created TVCs with their own content that suits the duration and the audience. However, OPPO still maintains television advertising due to a very high number of viewers in Vietnam.

In general, the OPPO brand has conveyed most of its messages about the facets of brand identity and it has characterized it by choosing the relevant celebrity endorsers and using optimized communication platforms. Due to Kapferer (2008), brand identity is considered as the core concept of brand management due to its contribution to brand constancy and continuity; and thus the brand management team should focus on brand identity to make the brand sustainable and realistic, and to convey coherent signs.

This study has some limitations. Firstly, 22 TVCs were selected from the approximately 50 TVCs in three years in Vietnam market, which is considered quite short. Actually, these 22 TVCs can only represent a certain part of OPPO's communication trend in Vietnam. The findings are consonant with the theory, but not really diversified. Secondly, the research focused exclusively on using entertainment celebrity to represent brand identity elements and choose TVCs to have celebrity endorsers. Thus, it is not proper to generalize these findings to advertisements using other types of celebrity such as sports celebrity. Lastly, this research focuses on only one country, Vietnam. These findings may not be well applied to brand communication in other western markets such as European countries and the United States due to cultural differences and differences in audience perceptions between Asian countries like Vietnam and Western countries.

7. Suggestion

Nowadays, with the development of marketing and advertising, brand managers not only raise brand awareness, but also proactively create a brand identity concept and develop good understanding for their brand.

7.1 Suggestion for application

7.1.1 Suggestion for Brand Communication/ Media Practitioners

Brand managers must clearly define what the element of their brand identity is because it is the key message that the brand should communicate to its target consumers. Then they should make the element-based strategy more closely to reach potential consumers who can clearly see each element of the brand. This is the key point for each brand to become the top of mind of the target consumers.

In addition, the important point that brand managers may adopt from these research results is the use of endorsement appeal in TVCs that OPPO has done in Vietnam. This is one of the effective trends that brand managers can consider to apply to their brand communication.

7.1.2 Suggestion for OPPO Brand

At first, OPPO brand should consider changing celebrity endorsers to some hot influencers since top influencers in Vietnam have huge number of followers on the social media and also lead the trend of fashion, technology, and lifestyle. The change could help OPPO create diversity in creating more activities on digital platforms, and could attract more consumers.

Secondly, most of the TVCs focused on lifestyle and gave the difficult situations in term of trouble with the phone. Looking back on the advertising trends in Vietnam, OPPO should create a series of short films with emotional appeals to make those short films more entertaining for the young audience. This creative strategy would allow the OPPO brand to be easily registered in the minds of target customers.

7.2 Suggestion for Future Research

7.2.1 Suggestion for Direction of Research

Future research can broaden their examination to the elements of brand communication such as brand equity or brand loyalty, and celebrity endorsers on consumer behaviors. They will provide a more diverse and comprehensive view of how to communicate brand messages to consumers.

7.2.2 Suggestion for Methodology

Researchers may consider and transfer this research to quantitative research in order to see the effectiveness of using celebrity endorser in brand communication to test a larger group of samples so that the data from the results will be more strategically beneficial.

Finally, this paper provides some insights on how OPPO communicates its brand identity through celebrity endorsers to Vietnamese audience. This communication strategy showed that effective use of celebrity endorsement was a combination of brand identity message and right choice of endorsers. OPPO has done a good job as they understand the six elements of the Brand Identity Prism and applied it to creating messages for all

advertisements so that the audiences understand the OPPO brand through multiple angles. The results of this research are meaningful and useful to practitioners who involve in influencer marketing, advertising, and/or brand communication, specifically brand managers who desire to communicate its brand to potential consumers more effectively.

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Code Share Strategy and Its Future Trend

Mrs. Nitana Maluangnon

School of Business Administration, Sripatum University

nitana.ma@spu.ac.th

ABSTRACT

This article seeks to identify what code share agreement is, why it is considered a popular marketing strategy for nearly half a century since its first implementation in 1970s. It is also to investigate from various reasons whether code share cooperation will remain effectively utilized among airlines in the future. The study found out that code share agreement has demonstrated its value via a worldwide utilization of airlines because of the advantageous to all concerned parties, not only partner airlines, passengers, airports as well as the government as a whole. Marketing carriers contribute much lower financial investment, comparing with own operation, to gain wider network coverages and market presences via code sharing. In addition, less regulatory effort is needed when airlines involve with code share arrangement. It enables airlines to ideally gain global network coverage to support convenient global transportation for passengers in response to the borderless world of today's. Notwithstanding that code share agreement does not produce the highest financial benefit to partner airlines, it is justified by the arrangement of less effort and difficulties, in comparison with joint venture agreements. The more complexity the partnership is, the more benefit could be generated. Code share agreement witnesses the most initial and essential cooperation to further develop into a higher degree of cooperation, for instance, global airline alliances and joint venture agreements. Consequently, this study believes that code share cooperation is a long-lasting airline marketing strategy and foreseen a productive strategy for the next decades.

KEYWORDS: Code Share, Deregulation, Joint Venture, Global Airline Alliances

1. INTRODUCTION

Code share cooperation amongst airlines became popular within the United States following the deregulation of the domestic air travel markets at the end of the 1970s, before spreading into international markets. In Europe, it similarly became more popular after the EU deregulation was in effect in 1993 (Steer Davies Gleave, 2007). In addition, airlines around the world have, in the recent years, increasingly applied code share as a marketing strategy to expand their networks. This growth has been widely driven by the development of collective business practices, both within the three global airline alliances and on a bilateral code share basis. (Wigivoyage, 2018).

Code share expansion of the existing partners as well as the announcement of new code share implementation between airline partners are seen, nearly every day, on newspaper or electronic magazine and press release. This includes sometimes few surprising news about the termination of a legendary code share agreement, or the implementation of few hardly believed partners; e.g. the BA-QF codeshare termination last 5 years, on March 31, 2013, or the just last year LH-EY codeshare implementation, on January 9, 2017, respectively.

This paper is, for this reason, intended to explore the strength and popularity of code share strategy that has been developed and utilized by carriers for nearly half a century, in airlines business.

2. OBJECTIVES

(1) To understand what codeshare cooperation is, and how it has been effectively working as a commercial strategy for an airline to be productive in the markets since its implementation.

(2) To review the degree of airline cooperation to confirm the higher degree of integration, the more benefit partners gain, and to investigate reasons that support codeshare strategy's popularity, including its possible future trend.

3. CODE SHARE COOPERATION

Code share cooperation is treated as an effective network strategy well accepted by most airlines whenever it is commercially feasible. The ability for airlines to code share on other airlines is an increasingly important element of airline operations, and delivers commercial flexibility for airlines to develop new markets on a cost-effective basis. Airlines that are marketing carriers are allowed to significantly expand their network coverage without deploying their own aircraft, no operating cost incurred (Steer Davies Gleave, 2007). It is no argument a win-win strategy for all parties involving with code share cooperation.

3.1 What is code share cooperation?

It is a cooperation agreement between two or more air carriers, by which at least one of the carriers sells the seats of a flight of the other carrier under its own designator code. Or it also is defined a marketing arrangement between airlines allowing them to sell seats on their code share partners' flights under their own designator codes (Gayle, 2007).

3.2 Advantages and disadvantages of code share cooperation

For airlines, it is the expansion of route networks and market presence without incurring the respective operating costs. In the case of connecting flight of two or more code-sharing carriers, the whole flight is displayed as a single carrier service on a computer reservation system. (Marty, Frédéric., & Saglietto, Laurence 2014). In addition, airlines initiate code share agreement with partners in order to test the market prior their own operation, once it is feasible.

For passengers, it gives them more choices in terms of flight schedules. They also can benefit if code share arrangement will lead to a larger number of well-organized connecting services and special fares being offered by different carriers. Though it would cause them and travel agents some confusions at the very beginning of code share era (Beyhoff, 1995).

For airports, it affects positively by a better network integration. As code-sharing leads to an increase of hub-and-spoke operations and a concentration on major hub airports (Beyhoff, 1995).

For country, as a whole, an expansion of code share services enhance the benefit of increased global connectivity, facilitating tourism and trade links (Wigivoyage, 2018).

3.3 Categories of Code Share Cooperation

Categorized by types of arrangement

3.3.1 Free-flow or Free-sales arrangement (automated): Code share where bookings made on the marketing carrier's code for a flight, in a given booking class, are accepted in real-time from the available seat inventory of the operating carrier, via the booking class mapping. Booking class mapping is a mapping between the booking class designators of code share airlines, generally set up so that the yields in each of the "mapped" pairs of booking class designators, are similar (Tugores-García, 2012).

3.3.2 Block seat arrangement (manual): A contractual arrangement between two airlines, whereby operating carrier allocates a number of seats for marketing carrier to sell under the code of marketing carrier. However, there are still 2 types of block seat arrangement; a soft block (marketing carrier can return unsold seats up to a pre-agreed number of days before the flight departs), and a hard block (marketing carrier has to pay for the whole seat allotment, regardless of how many seats are sold) (Gayle, 2007).

3.4 Categorized by geographical code-shared routes

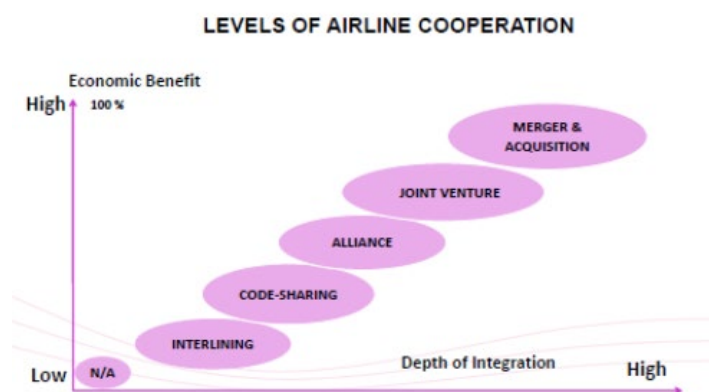
3.4.1 Parallel operation on a trunk route: Two code shared carriers both operate the same sector (flown airport pair), and each gives its designator code to the other's operated flights. This is sometimes known as "online code shares" (Steer Davies Gleave, 2007).

3.4.2 Unilateral operation on a trunk route: A marketing carrier puts its code on a sector operated by another carrier operated the aircraft, but not by itself, and not connecting to one of its own operated flights. This is known as "network extension code shares" (Steer Davies Gleave, 2007).

3.4.3 Behind and beyond route (connecting to a trunk route service): A marketing carrier puts its code on sectors, operated by another carrier that operate the service, to provide connections with its own operated sectors. Connecting code shares generally require the marketing carrier to sell an interline journey. This kind of code-share is also known as an "interline code share" (Steer Davies Gleave, 2007).

4. LEVELS OF AIRLINE COOPERATION

In pursuance of transporting the passengers to reach to their destination where one airline cannot reach. Partnership between airlines has taken place. The below diagram demonstrates the levels of airline cooperation emerged from the most basic level, interlining, and to the most advance level, merger and acquisition. It is certifying the higher degree or the more complex the partnership is, the more economic benefit earns by airline partners.



Modified from Figure 1 Airline Partnership Continuum (Page 2, Lewis, et.al, 2017)

4.1 Interline agreements

Interline agreements are the most basic type of agreements between partner airlines. It is simply a commercial agreement between airlines to handle passengers when they're traveling on multiple airlines on the same itinerary. The airlines concerned have to be the members of MITA, Multilateral Interline Traffic Agreement, enabling them to issue tickets for passenger travel on itineraries involving the services of other carriers potentially be rebooked on another airline in the event of irregular operations. With regard to the settlement, airlines apply MPA, Multilateral Prorate Agreement, specifying the default mechanism for dividing international through fares between the carriers used on a particular itinerary (Ratliff, & Weatherford, 2013).

4.2 Codeshare agreements

A code share agreement is defined the next and higher degree of cooperation between airlines, described under Item 3. In principle, there is no limit to the number of marketing carriers on any one flight, although Global Distribution System (GDS) system limitations restrict up to 11 (Gayle, 2007).

The settlement agreed upon by code share partners is mostly based on SPA, Special Prorate Agreement. This could also include the ISC, Interline Service Charge, payable from the operating airline to the marketing airline with some reasons (Steer Davies Gleave, 2007).

4.3 Alliances agreements

Airline alliances are formed when different airlines agree to substantially cooperate with each other. Alliance agreements are regarded as a base agreement signed by a number of member airlines, to cover a wide-range of airline cooperation to generate global joint passenger benefits and privileges. This agreement may include also the clause regarding membership's fees and few other mandatory requirements such as code sharing, frequent flyer program, lounge access, passenger through check-in, of which each agreement is to arrange on each bilateral basis (Goh, & Uncles, 2001).

Since the late 1990s, network airlines worldwide have been enrolling in one of the three current Global Airline Alliances (GALs), oneworld, Star Alliance and SkyTeam. By 2011, airlines belonging to the three GALs transported over two-thirds of all international traffic (Antonio MIT, 2011). The "BIG THREE" Global Airline Alliances (GAL) - Star Alliance, oneworld, and SkyTeam, - have only developed in the past 20 years. The first and strongest alliance is Star Alliance (14 May 1997, 28 members), followed by oneworld (1 February 1999, 14 members), and SkyTeam (20 June 2000, 20 members) (Lucky, 2017). GAL has brought passengers maximum travel benefits through convenient global network coverage air-transportation.

4.4 Joint venture agreements

Joint venture (JV) agreements require much deeper collaboration among partner. If a code share agreement is like dating, then a joint venture is like getting married. (Lucky, 2017) A joint venture agreement is a massive business decision that typically requires extensive government approval because when airlines form a joint venture they coordinate pricing and flight schedules, and discuss cost and revenue before put those concerned factors into agreements based on mutual and commercial-feasible agreements between or among partner airlines.

There are various types of airlines' financial compensation derived from JV cooperation, such as a cost sharing or revenue sharing or cost and revenue sharing formula. Exactly how each formula works depending on the specific agreement, but the idea is that two airlines are essentially acting as one under a joint venture. However, the downside of JV possibly results into less competition in the market as well as leads to higher fares on the JV sectors (Lewis, et.al, 2017).

4.5 Merger and acquisition agreements

Mergers and acquisitions in the transportation sector are typically explained as attempts to capture economies of scale and scope through shared infrastructure and related cost-saving measures. In the airline industry, the past 15 years have seen an increasing number of international mergers and acquisitions that would have been blocked under prior regulatory regimes. This activity suggests that there are indeed gains from increasing airline size. However, in many cases, gains may be unique to specific airlines or operational situations (Nolan, et. al 2014).

5. POPULARITY OF CODE SHARE STRATEGY

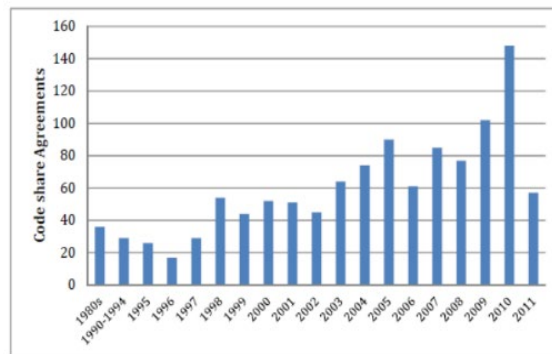


Figure 3.1.2. Distribution of valid code share agreements in September 2011 by its start date. ^{34,35}

The above diagram, Figure 3.1.2 (Page 64 -Antonio MIT, 2011), shows that code share agreements among partner airlines have been increasing from 1980 to 2011 to prove the popularity of code share strategy utilized around the world.

Code share agreements are normally not stand-alone documents. They, in general, include few supportably related agreements that are Special Prorate Agreements (SPA), as well as Frequent Flyer Program (FFP) agreements. In addition, to support more conveniences for passengers, code share partners shall also provide relevant procedures for handling passengers (through check-in, flight transfer, luggage retrieval, and etc.). Particularly, how code share flight irregularities, including any concerned liabilities should be managed. These agreements are, even though separate agreements, they do enhance and facilitate the productivity and effectiveness of code share agreements.

For FFP agreement, the marketing carrier allows their customers to earn and accumulate mile when they fly on its code share partner, the operating carrier. The SPA, similarly, with the agreed special rate the marketing carrier is paying the operating carrier for the code shared sector. This is thus enhancing more sales on the code share routes by the marketing airlines, in preference for the operating airlines to other airlines.

Airlines believe that these factors - enhancing customer reach, widening the offer to customers and giving confidence to the market about products offered in combination with other carriers - will generate additional traffic, and hence revenue, at relatively low cost. For example, a figure of 20% was mentioned by one airline as an example of the expected increase in passenger traffic when an interline connection is upgraded into a code-share connection (Steer Davies Gleave, 2007).

Code share agreements, furthermore, can be distinguished from the broader relationships justifying the three major global airline alliances (Star Alliance, SkyTeam and oneworld). Alliance members often arrange code share agreement with each other, on a bilateral basis. This is particularly the case for airlines that only choose to code-share within the same alliance (Marty, & Sagleitto, 2014).

6. CONCLUSION

Code share agreement has been perpetually utilized for half a century since it was brought into effect by airlines. It has proved its advantages to all concerned parties. It is considered the primary airline cooperation between partners, next to the interline agreements. It could lead to various kinds of higher degree of partnership. It could be a basic requirement for an airline to enter into a membership of a global airline alliance. It is, therefore, found an initial and essential cooperation between and among partner airlines.

The scale and importance of code share agreements illustrated in the August 2011 Edition of Worldwide Airline Codeshare Routes Listing (as of 08AUG11) show that there are 202 airlines around the world, with over 1600 pairs of airline partnership (includes duplication due to some are bilateral agreements), covering nearly 16000 routes (with duplication) (Routes Online, 2011). This growth is double, comparing with number found from the annual airline alliance survey of the largest 200 airlines published by Airline Business magazine (in September 2006) that all of the over 100 airlines that responded had code share cooperation with several partner airlines (Steer Davies Gleave, 2007). It could, hence, be foreseen that the growth of code share cooperation is continual.

When code share agreement, in particular, has less complexity, it needs less integration process between partners. This could result in a much easier cooperation for partners to implement if code share agreement is compared with other higher degree of airline partnership agreements. It is, in addition, observed from the 'Levels of Airline Cooperation' that code share agreements are a primary cooperation among partner airlines prior further development to higher degrees of integration, either global airline alliance or joint venture agreement.

Consequently, the study believes that code share strategy is not only growing but also could become a long-lasting airline marketing strategy, in the future.

7. RECOMMENDATION

This article could be a base study to further investigate whether code share cooperation is a critical requirement to enable a new airline member entering into a global airline alliance. In particular, this study could lead to a further review on how global airline alliances develop their global network coverage effectively, and whether the strength of code share network among member airlines mainly affects the strength of the alliance.

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Rectangular magnetic efficiency for magnetic nanoparticles in micro-vessel

Thawachchai Jongkolrat

Department of Physics, Faculty of Science, Naresuan University, Phitsanulok 65000

E-mail: thawachchai58@email.nu.ac.th

Ketvalee Yongram

Department of Physics, Faculty of Science, Naresuan University, Phitsanulok 65000

E-mail: ketvaleey@nu.ac.th

Nattapong Yongram

Department of Physics, Faculty of Science, Naresuan University, Phitsanulok 65000

E-mail: nattapongy@nu.ac.th

ABSTRACT

A mathematical model has been developed to describe the trajectories of magnetic nanoparticle in a micro-vessel for the application of magnetic drug targeting. The magnetic nanoparticles are injected upstream from malignant tissue into the micro-vessel and are captured at the tumour site with the help of an applied magnetic field by a Nd-Fe-B rectangular magnet positioned outside the body. We take into account the non-Newtonian fluid model for the blood in the micro-vessel. The behaviour of blood is considered according to the Herschel-Bulkley fluid model which is more suitable for micro-vessels with a radius of 50 micrometres. The expression of the fluidic force on the carrier particle traversing in the Herschel-Bulkley fluid is obtained first. The results show that the carrier particle transport as well as capture in the micro-vessel is influenced by several factors, such as the size of the carrier particle, the volume fraction of the embedded magnetic nanoparticle, rheological parameter and the behaviour index of Herschel-Bulkley fluid model. The results are computed using MATHEMATICA and MATLAB programs.

KEYWORDS: Magnetic drug targeting, Magnetic nanoparticles (MNPs), Herschel-Bulkley fluid model, Non-Newtonian fluid model, rheological parameter.

1. INTRODUCTION

Magnetic targeting of anticancer agents to malignant tissue using magnetic carrier particles has become a focus of interest because it can improve the effectiveness of treatment, which is needed to completely destroy malignancies while reducing its side effects. In magnetic drug targeting, magnetic carrier particles with

surface-bound drug molecules are injected into the vascular system upstream from the malignant tissue, and are captured at the tumour site via a locally applied magnetic field. Upon achieving sufficient concentration, the drug molecules are released from the carriers by changing physiological conditions such as pH, osmolality, temperature, or different enzymatic activity, which helps in releasing the drug molecules from the carrier particle. Sometimes higher dosages can be applied for more effective treatment as the therapeutic agents are localized to regions of diseased tissue. Over the past 20 years, it has been found that there are many experimental [1,9] and theoretical [6,11,13,15] studies of magnetic drug targeting. The development of mathematical modelling for magnetic drug targeting provides a prediction of the transport and capture of magnetic nanoparticles in the micro-vessels. The experimental system whereby non-invasive therapy, i.e. medicine, is injected into the body upstream of the malignancy and magnetically directed to the malignancy. A cylindrical magnet is placed outside the body near the diseased tissue [4,14,17,18]. A mathematical model has been developed for predicting the transport and capture of the carrier particles taking into account the dominant magnetic and fluidic forces. Due to the applied magnetic force, the carrier particles that are coupled with the magnetic nanoparticles are attracted towards the tumour. The magnetic field is balanced by the fluidic force, which arises due to the blood flow through the micro-vessels. Furlani and Furlani [4] presented a mathematical model for predicting magnetic targeting of multifunctional carrier particles that are designed to deliver therapeutic agents to the malignant tissue *in vivo*. Recent work by Shaw *et al.* [14] extended the work of Furlani and Furlani [4] by using the Herschel-Bulkley fluid model for blood in the impermeable micro-vessel fluid, which is more realistic and suitable for micro-vessel of a radius of 50 micrometres.

In addition to the properties of blood in the micro-vessel, the type and properties of an applied magnet which controls the movement of magnetic nanoparticles in micro-vessel is taken into account for mathematical modelling of magnetic drug targeting as well. Earlier work by Uthra and Vasanthakumari [16-19] used a rectangular magnetic plate as an applied magnet, and by Kayal *et al.* [8] used a rectangular and cylindrical magnet as one.

In this study we present an analytical model for predicting the transport and capture of magnetic nanoparticles in the micro-vessel. Magnetophoretic control of the particles is provided by a rectangular magnet positioned outside the body as shown in Figure 1.

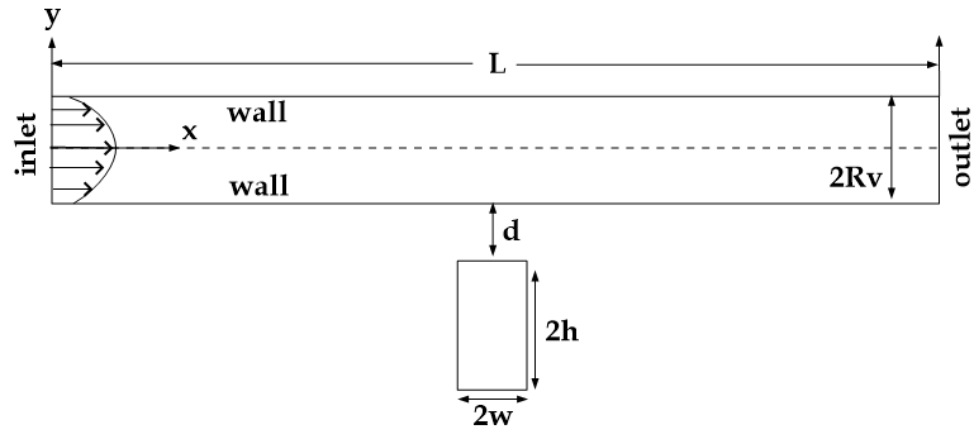


Figure 1 The 2D micro-vessel geometry, reference frame and variables used for the numerical analysis as given by Kayal *et al.* [8].

It shows the geometrical simulations, x and y denoting horizontal and vertical coordinates, respectively, the magnet is placed midway along the x axis. We assume that the behaviour of the blood is considered as Herschel-Bulkley fluid which is suitable for micro-vessel of a radius $50\mu\text{m}$. The expression for the fluidic force for the carrier particle traversing in the blood in this is obtained first. Several factors that influence the magnetic targeting of the carrier particles in the micro-vessel, such as the size of the carrier particle, the properties of the applied magnetic field, the volume fraction of the embedded magnetic nanoparticle, rheological parameter and the behaviour index of Herschel-Bulkley fluid model in the present problem. The analysis is applicable when the tumours are positioned within a few centimetres of the field source.

2. RESEARCH OBJECTIVE

- (1) To analyse the movement of particles upon the Herschel-Bulkley fluid model and an applied magnetic field by Nd-Fe-B rectangular magnet.
- (2) To predict particle trajectories using numerical field calculation.
- (3) To study the influential parameters with the help of trajectories.
- (4) To implement the model by solving stiff differential equations using MATHEMATICA and MATLAB programs and also to trace the trajectories accurately.

3. THEORY AND METHODS

3.1 Equation of motion

In the analytical study of travelling magnetic nanoparticles in micro-vessels, two forces are taken into account the magnetic force due to all field sources and viscous drag, which acts on them. The other interactions, e.g. inertia, buoyancy, gravity, thermal kinetics (Brownian motion), particle fluid interactions, and inter particle

effects that include magnetic dipole interactions, electric double layer interactions, and the van der Waal force, are negligible for such magnetic nanoparticles. Therefore the trajectory of the motion of the magnetic nanoparticle in the magnetic field and viscous fluid ambient using Newton's 2nd law

$$m_{cp} \frac{d\vec{v}_{cp}}{dt} = \vec{F}_m + \vec{F}_f \quad (1)$$

where m_{cp} and \vec{v}_{cp} are the mass and velocity of the carrier particle, and \vec{F}_m and \vec{F}_f are the magnetic and fluidic forces, respectively. The inertia term $m_{cp} (d\vec{v}_{cp}/dt)$ is often ignored for submicron particles as their mass is negligible [7]. So the final force balance is written as $\vec{F}_m + \vec{F}_f = 0$. With considering the fluidic force on the spherical magnetic nanoparticle in Herschel-Bulkley fluid, let the radius and length of the straight circular micro-vessel be R_v and L , respectively. It is considered that the inner vessel wall is impermeable and non-absorbent for the solute. The blood flow is a fully developed laminar flow parallel to the axis. Based on these assumptions, the blood velocity is described by piecewise radiation [11,12].

$$v_f = \left(\frac{1}{2\eta} \frac{dp}{dx} \right)^{\frac{1}{n}} \frac{n}{n+1} \begin{cases} (1 - \xi_c)^{1+\frac{1}{n}}, & r < R_c \\ (1 - \xi_c)^{1+\frac{1}{n}} - ((r/R_v) - \xi_c)^{1+\frac{1}{n}}, & r > R_c \end{cases} \quad (2)$$

where R_c denotes the radius of the core region of micro-vessel, r denotes the radial coordinate, $dp/dx = 2 \times 10^4$ N/m² denotes the axial pressure gradient and the rheological parameter $\xi_c = R_c / R_v$ which is a non-dimensional quantity. The volume flow rate \dot{Q} is obtained by integrating the velocity Eq.(2) across the cross section of the micro-vessel leading to

$$\dot{Q} = 2\pi \int_0^R v_f r dr = \frac{\pi}{2} \left(\frac{1}{2\eta} \frac{dp}{dx} \right)^{\frac{1}{n}} \frac{n}{1+n} R_v^{3+(1/n)} A(\xi_c) \quad (3)$$

Where

$$A(\xi_c) = 2 \left[\xi_c^2 (1 - \xi_c)^{1+1/n} + (1 + \xi_c)(1 - \xi_c)^{2+1/n} - \frac{2n}{1+3n} (1 - \xi_c)^{3+1/n} - \frac{2n}{1+2n} \xi_c (1 - \xi_c)^{2+1/n} \right] \quad (4)$$

From Eq.(3), the mean velocity \bar{v}_f is obtained as

$$\bar{v}_f = \frac{\dot{Q}}{\pi R_v^2} = \left(\frac{1}{2\eta} \frac{dp}{dx} \right)^{\frac{1}{n}} \frac{n}{1+n} R_v^{1+(1/n)} A(\xi_c) \quad (5)$$

As the rheological parameter ξ_c goes to zero and with $n = 1$, the term $A(\xi_c)$ tends to unity and recovers the classical Poiseuille flow. On the other hand, with increase in ξ_c , the mean velocity \bar{v}_f reduces and it becomes zero for $\xi_c = 1$. Notice that in such a case, the pressure drop along the capillary is not enough to overcome the yields stress and therefore no flow would occur.

The drag experienced by the spherical magnetic nanoparticle in a Newtonian fluid flow is different from that in a non-Newtonian fluid flow. The drag on a shear in a power-law fluid has been discussed in detail

by Dazhi [3] and Tanner and that in a Herschel-Bulkley fluid was discussed in Atapattu *et al.*[2] . Following Atapattu *et al.*[2], the drag coefficient for the spherical magnetic nanoparticle in a Herschel-Bulkley fluid may be defined as $C_D = C_D(Q^*, n) = 24X(n)/Q^*$, $X(n)$ representing the drag correction factor [3] which depends on the value of n , where the dynamic parameter Q^* is defined as, $Q^* = \text{Re}^*/(1 + \kappa Bi^*)$. The Reynolds number Re^* and Bingham number Bi^* are written as

$$\text{Re}^* = \frac{v_{cp}^{2-n} d_{cp}^n \rho}{m} \quad (6)$$

and

$$Bi^* = \frac{\tau_y}{m(v_{cp}/d_{cp})^n} \quad (7)$$

where v_{cp} is the relative velocity of the carrier particle in Herschel-Bulkley fluid in the micro-vessel which is subjected to the magnetic field (which is to be determined). Also d_{cp} , ρ , m , τ_y and n are the diameter of the carrier particle, density of the fluid, the Herschel-Bulkley model parameter, yields stress and flow behaviour index in Herschel-Bulkley model, respectively. The constant κ has the value near unity. The fluidic force on the spherical carrier particle in a laminar flow of Herschel-Bulkley fluid [2] is written as

$$F_f = -\frac{1}{2} \pi \rho R_{cp}^2 v_{cp}^{2-n} C_D \quad (8)$$

and this in the component form in the $x - y$ plane is given by

$$F_{fx} = -12\pi X(n) R_{cp}^2 \left[\tau_y + \eta \left(\frac{v_{cp,x} - \bar{v}_f}{2R_{cp}} \right)^n \right] \quad (9a)$$

$$F_{fy} = -12\pi X(n) R_{cp}^2 \left[\tau_y + \eta \left(\frac{v_{cp,y}}{2R_{cp}} \right)^n \right] \quad (9b)$$

where \bar{v}_f is the average velocity of the fluid given in Eq.(5) for impermeable micro-vessel, and yield stress $\tau_y = 4 \times 10^3 \text{ N/m}^2$. In this study, it is assumed the effective viscosity η of the Herschel-Bulkley fluid is $1.8 \times 10^{-3} \text{ P.s}$ at the temperature 300K.

We then the magnetic force on the spherical magnetic nanoparticle in Herschel-Bulkley fluid, which is obtained by using the “effective” dipole moment method in which the magnetized nanoparticle is replaced by an “equivalent” point dipole with a moment $\bar{m}_{p,eff}$. The force on the dipole (and hence on magnetic nanoparticles) is given by

$$\bar{F}_m = \mu_f (\bar{m}_{p,eff} \cdot \bar{\nabla}) \bar{H}_a \quad (10)$$

where $\mu_f \approx \mu_0$ is the permeability of the transport fluid, the effective dipole moment of magnetic nanoparticles $\vec{m}_{p,eff} = N_{mp} V_{mp} f(H_a) \vec{H}_a$, V_{mp} being the volume of magnetization of particles, N_{mp} being identical non-interacting magnetic nanoparticles embedded in the carrier particle, $N_{mp} V_{mp}$ being the total volume occupied by nanoparticles which can be represented in terms of a volume fraction $\beta_{vf} V_{cp}$ of the carrier particle later, and $f(H_a)$ representing the function which depends on the magnetic field intensity of $H_a = |\vec{H}_a|$ [4-6],

$$f(H_a) = \begin{cases} \frac{3(\chi_{mp} - \chi_f)}{(\chi_{mp} - \chi_f) + 3}, & \text{for } H_a < \frac{((\chi_{mp} - \chi_f) + 3)}{3\chi_f} M_s \\ \frac{M_s}{H_a}, & \text{for } H_a \geq \frac{((\chi_{mp} - \chi_f) + 3)}{3\chi_f} M_s \end{cases} \quad (11)$$

Where $\chi_f \approx 0$ is the susceptibility of nonmagnetic fluid, $\chi_{mp} = \frac{\mu_{mp}}{\mu_0} - 1$ and μ_{mp} are the susceptibility and permeability of the particles, respectively, and $\mu_0 = 4\pi \times 10^{-7} \text{ H/m}$ is the permeability of the air, and M_s is the saturation magnetization. In Eq. (11), \vec{H}_a is the (externally) applied magnetic field intensity at the centre of the carrier particle, where the equivalent point dipole is located. In this study, the analytical expressions obtained for the x - and y -components of the magnetic field intensity for a rectangular magnet are [4]

$$H_{ax}(x, y) = \frac{M_s}{4\pi} \left[\ln \left(\frac{(x+w)^2 + (y+d+R_v)^2}{(x+w)^2 + (y+d+R_v+2h)^2} \right) - \ln \left(\frac{(x-w)^2 + (y+d+R_v)^2}{(x-w)^2 + (y+d+R_v+2h)^2} \right) \right] \quad (12a)$$

$$H_{ay}(x, y) = \frac{M_s}{2\pi} \left[\tan^{-1} \left(\frac{2h(x+w)}{(x+w)^2 + (y+d+R_v+h)^2 - h^2} \right) - \tan^{-1} \left(\frac{2h(x-w)}{(x-w)^2 + (y+d+R_v+h)^2 - h^2} \right) \right] \quad (12b)$$

where the width and the height of the rectangular magnet are denoted by $2w$ and $2h$, respectively, and the distance between the surface of the magnet and the bottom wall d and the radius R_v of the straight circular micro-vessel. We take into account nonmagnetic fluid and high susceptibility of magnetic nanoparticle, i.e. $|\chi_{mp}| \gg 1$. Therefore, the magnetic force can be written as

$$F_{mx} = 3\mu_0 N_{mp} V_{mp} \frac{hM_s^2}{\pi^2} \left\{ (y+d+R_v+h) \ln\left(\frac{ak}{bc}\right) \left[\frac{(x+w)}{ab} - \frac{(x-w)}{ck} \right] \right. \\ \left. + \tan^{-1} \psi \left[\frac{-(x+w)^2 + (y+d+R_v)(y+d+R_v+2h)}{ab} \right. \right. \\ \left. \left. + \frac{(x-w)^2 - (y+d+R_v)(y+d+R_v+2h)}{ck} \right] \right\} \quad (13a)$$

$$F_{my} = 3\mu_0 N_{mp} V_{mp} \frac{hM_s^2}{2\pi^2} \left\{ \ln\left(\frac{ak}{bc}\right) \left[\frac{(\phi-h^2) - 2(x+w)^2}{(\phi-h^2)^2 + 4h^2(x+w)^2} - \frac{(\phi-h^2) - 2(x-w)^2}{(\phi-h^2)^2 + 4h^2(x-w)^2} \right] \right. \\ \left. - 2(y+d+R_v+h) \tan^{-1} \psi \left[\frac{(x+w)}{(\phi-h^2)^2 + 4h^2(x+w)^2} - \frac{(x-w)}{(\phi-h^2)^2 + 4h^2(x-w)^2} \right] \right\} \quad (13b)$$

where

$$\begin{aligned} a &= (x+w)^2 + (y+d+R_v)^2 & b &= (x+w)^2 + (y+d+R_v+2h)^2 \\ c &= (x-w)^2 + (y+d+R_v)^2 & k &= (x-w)^2 + (y+d+R_v+2h)^2 \\ \phi &= (x+w)^2 + (y+d+R_v+h)^2 & \varphi &= (x-w)^2 + (y+d+R_v+h)^2 \\ \psi &= \frac{2h[(x+w)\varphi - (x-w)\phi - 2wh^2]}{(\phi-h^2)(\varphi-h^2) + 4h^2(x^2-w^2)} \end{aligned}$$

We calculate the velocity of the components of the carrier particle in $x-y$ plane by substituting Eqs.(9a)-(9b) and (13a)-(13b) into Eq. (1). In this case we take into account that the magnetic forces components are the x -direction and negative y -direction, we have

$$v_{p,x} = 2R_{cp} \left(\frac{2\mu_0 \beta_{vf} R_{cp}}{3\eta X(n)} \frac{hM_s^2}{\pi^2} \left\{ (y+d+R_v+h) \ln\left(\frac{ak}{bc}\right) \left[\frac{(x+w)}{ab} - \frac{(x-w)}{ck} \right] \right. \right. \\ \left. \left. + \tan^{-1} \psi \left[\frac{-(x+w)^2 + (y+d+R_v)(y+d+R_v+2h)}{ab} \right. \right. \right. \\ \left. \left. \left. + \frac{(x-w)^2 - (y+d+R_v)(y+d+R_v+2h)}{ck} \right] \right\} - \frac{\tau_y}{\eta} \right)^{\frac{1}{n}} + \bar{v}_f \quad (14a)$$

and

$$v_{p,y} = 2R_{cp} \left(\frac{-\mu_0 \beta_{vf} R_{cp} h M_s^2}{6\eta X(n) \pi^2} \right) \left\{ \ln \left(\frac{ak}{bc} \right) \left[\frac{(\phi - h^2) - 2(x+w)^2}{(\phi - h^2)^2 + 4h^2(x+w)^2} - \frac{(\phi - h^2) - 2(x-w)^2}{(\phi - h^2)^2 + 4h^2(x-w)^2} \right] \right. \\ \left. + 2(y+d+R_v+h) \tan^{-1} \psi \left[\frac{(x+w)}{(\phi - h^2)^2 + 4h^2(x+w)^2} - \frac{(x-w)}{(\phi - h^2)^2 + 4h^2(x-w)^2} \right] \right\} - \frac{\tau_y}{\eta} \right)^{\frac{1}{n}} \quad (14b)$$

4. RESULTS AND DISCUSSION

The results of our studies of the transport of magnetic nanoparticles show that it is important to note that the susceptibility of the suspending medium has a significant effect on the magnetic force. The nanoparticles that are used in the carrier particles for these being attracted by the external magnetic field are Fe_3O_4 particles and these biocompatible with a density 5000 kg/m^3 . In this work, we aim to study the effect of the external magnetic field to capture the drug carrier particles at the tumour position in the Hershel-Bulkley blood flow in the micro-vessel.

First, we use Eqs. (12a)-(12b) and (13a)-(13b) to compute the magnet field and force along the axis of the micro-vessel $(-L/2 \leq x \leq L/2)$ which 5 mm from the surface of Nd-Fe-B rectangular magnet. The width $2w$ and the high $2h$ of the rectangular magnet are 50 and 100 mm , respectively. A magnetization M_s of the rectangular magnet is 10^6 A/m . The force per $3\mu_0 N_{mp} V_{mp}$ is computed on a Fe_3O_4 nanoparticle with a radius $R_{mp} = 100 \text{ nm}$. We plot the value of H_x , H_y , $F_{mx}/3\mu_0 N_{mp} V_{mp}$ and $F_{my}/3\mu_0 N_{mp} V_{mp}$, along with corresponding data obtained using the MATHEMATICA program, as shown in Figures 2 and 3. Notice that H_y obtains its maximum value at the centre of the magnet $(x = 0)$, whereas H_x peaks at the edges $(x = \pm 25 \text{ mm})$, and alternates in sign from one edge to the other.

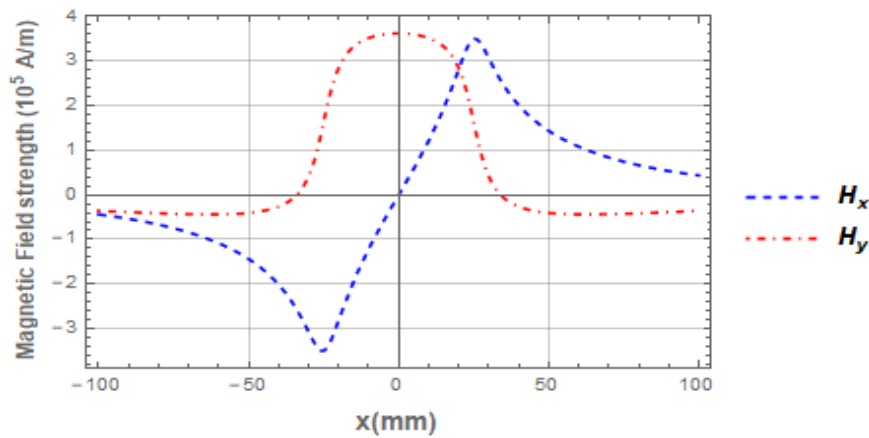


Figure 2 Magnetic field strength components along the axis of a micro-vessel.

Figure 3 shows the variation in $F_{mx} / 3\mu_0 N_{mp} V_{mp}$ and $F_{my} / 3\mu_0 N_{mp} V_{mp}$ across the dimensionless length x / L of the micro-vessel. The $F_{mx} / 3\mu_0 N_{mp} V_{mp}$ plots suggest that upstream the magnitude of the force field gradually increases but downstream it progressively decreases. The y -component force field $F_{my} / 3\mu_0 N_{mp} V_{mp}$ creates a gradient of magnetic force in the negative y -direction, which moves the particles towards the magnetic. These curves also show that $F_{my} / 3\mu_0 N_{mp} V_{mp}$ decays sharply away from the magnet towards the inlet and outlet of the micro-vessel.

For the rectangular magnet $F_{my}(d = 5 \text{ mm})$, $F_{my}(d = 10 \text{ mm})$ and $F_{my}(d = 15 \text{ mm})$ the force component is maximum near the corner of the rectangular magnet.

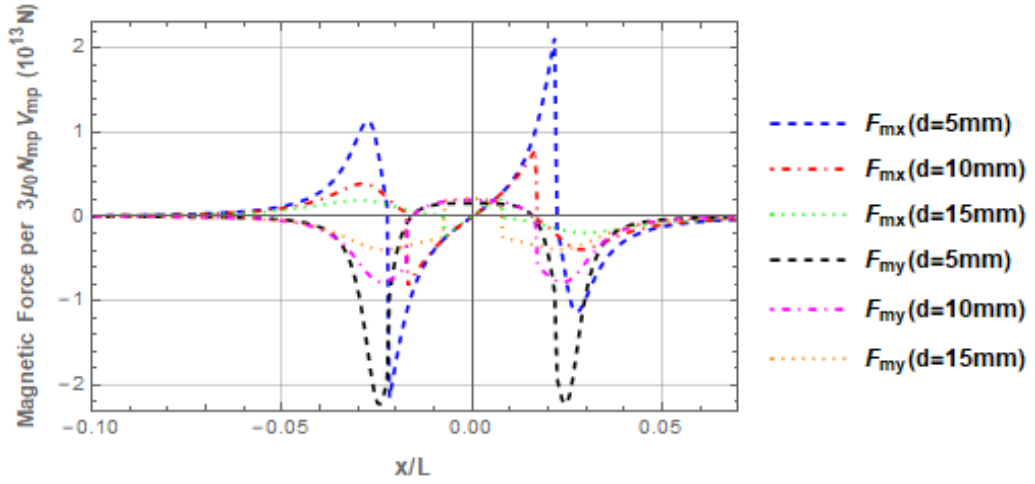


Figure 3 Variation of magnetic force per $3\mu_0 N_{mp} V_{mp}$ component along the x direction (x / L), when the blood vessel is at a distance of 5, 10 and 15 mm from the surface of the magnet.

The trajectories of the carrier particles in the micro-vessel for three different rheological parameters ξ_c has been shown in Figure 4. It is observed that the tendency to be captured by the magnetic force increases with increase in rheological parameters. From Eqs.(4)-(5) and the condition $N_{mp} V_{mp} = \beta_{vf} V_{cp}$, it is clear that due to growing rheological parameters, the mean velocity reduces, which the tendency to be captured by the magnetic force increases.

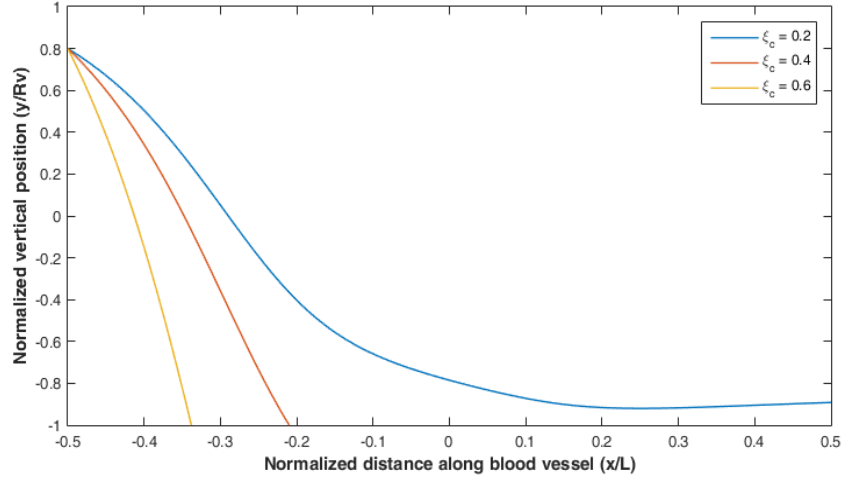


Figure 4 Trajectories of the carrier particle in micro-vessel for different rheological parameters ξ_c ($R_{cp} = 500 \text{ nm}$, $n = 1$, $d = 5 \text{ mm}$, $\beta_{vf} = 20\%$).

The trajectories of the carrier particle for two different volume fractions have been shown in Figure 5. We found that the tendency to be captured by the magnetic force increase with increase in volume fraction of the magnetic particle. From the condition $\beta_{vf} V_{cp} = N_{mp} V_{mp}$, it is clear that due to volume fraction, the total volume of the magnetic particles increase, which increase the magnetic force between the magnet and the carrier particle. The radius of carrier particle has a significant effect on the trajectory of the carrier particles. The volume of the carrier particle increases with the radius and therefore the magnetic force between the carrier particle and magnet increase. This conclusion is consistent with that given by Lubbe *et al.* [9], so it is suggested that relatively larger radii nanoparticles are grouped with the drug particles in the formation of the carrier particles for the carrier particle to be attracted more by the external magnetic field and thereby leading to greater deposition of the drug concentration near the tumour. For varying radii of the carrier-particles is shown in Figure 6.

The trajectory of the particle corresponding to different value of flow behaviour index n of Herschel-Bulkley fluid has been plotted in Figure 7. Three different values of flow index viz. $n = 0.85$, $n = 1$ and $n = 1.15$ are considered for this study. The tendency of the carrier particle to be captured by the magnet increase with the rheology of blood changing from shear thinning to shear thickening.

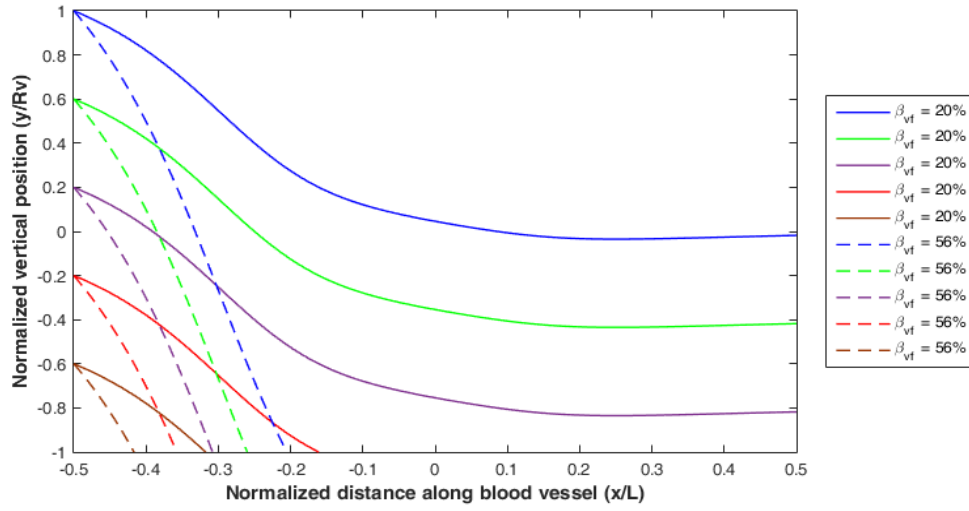


Figure 5 Trajectories of carrier particles in micro-vessel for different volume fractions β_{vf}
 $(R_{cp} = 500 \text{ nm}, n = 1, \xi_c = 0.4)$.

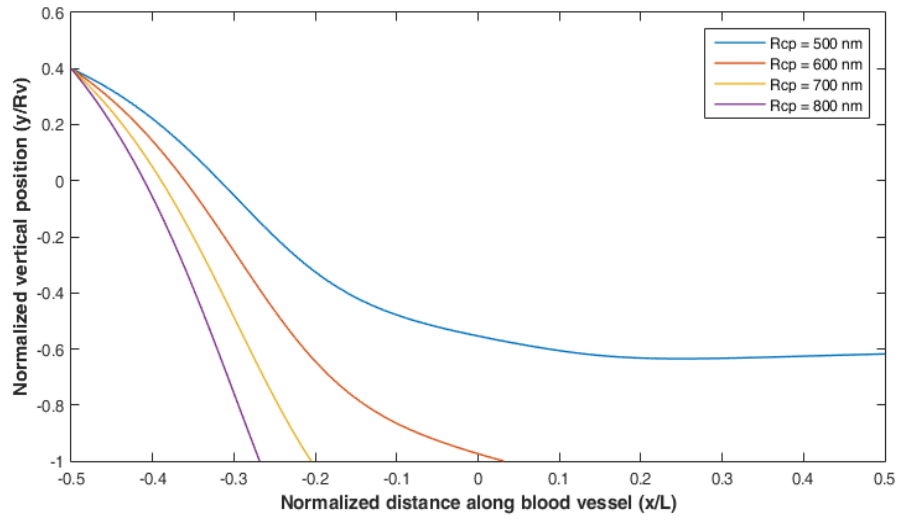


Figure 6 Trajectories of carrier particles in micro-vessel for differential value of carrier particle radius R_{cp}
 $(n = 1, \xi_c = 0.4, \beta_{vf} = 20\%)$.

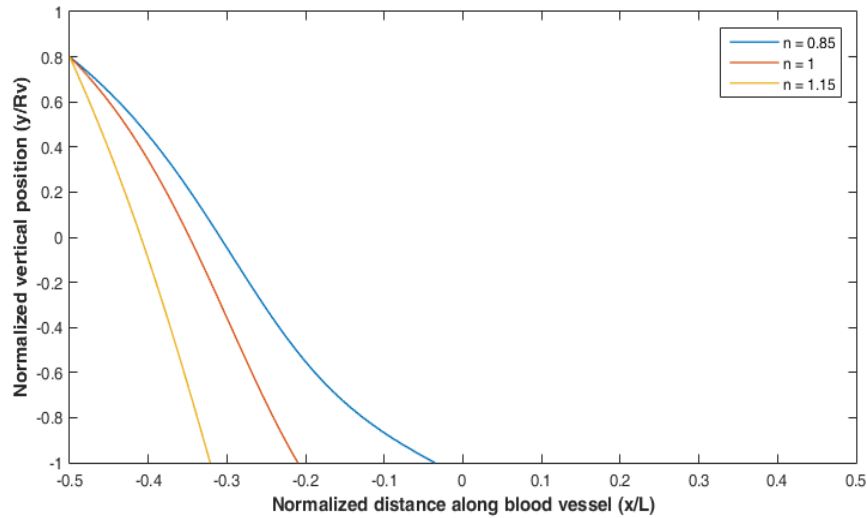


Figure 7 Comparison of the trajectories of carrier particles in micro-vessel for different values of the flow behaviour index n of Herschel-Bulkley fluid model ($\beta_{vf} = 20\%$, $d = 5 \text{ mm}$, $R_{cp} = 500 \text{ nm}$).

5. CONCLUSION

The result of this study found that the size of the carrier particles, volume fraction, the distance between the surface of the magnet and the axis of the micro-vessel, and the rheology of blood as Herschel-Bulkley fluid are important. It is observed that the carrier particles are captured by the magnet easily when the radius of the carrier particles increase as shown in Figure 6. Also, with increases in the volume fraction, the tendency of the particle to be captured by the magnetic field increases as shown in Figure 5. Also, the tendency of the particle to be captured by the magnet increases when the rheology of blood changes from the shear thinning to shear thickening as shown in Figure 4. The tendency of the carrier particle to be captured by the magnet increase when behaviour index n of Herschel-Bulkley fluid model increase as shown in Figure 7. It is more important that the drag be released from the magnetic carrier close to the target tissue.

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Trajectories of magnetic nanoparticle transport in the micro-vessels

Thawachchai Jongkolrat

Department of Physics, Faculty of Science, Naresuan University, Phitsanulok 65000

E-mail: thawachchai58@email.nu.ac.th

Nattapong Yongram

Department of Physics, Faculty of Science, Naresuan University, Phitsanulok 65000

E-mail: nattapongy@nu.ac.th

Ketvalee Yongram

Department of Physics, Faculty of Science, Naresuan University, Phitsanulok 65000

E-mail: ketvaleey@nu.ac.th

ABSTRACT

The purpose of this study is to develop a mathematical model for the quantitative description of magnetic nanoparticle trajectories in a micro-vessel. The magnetic nanoparticles are injected upstream from malignant tissue into the micro-vessel and are captured at the tumour site with the help of an applied magnetic field. The applied field is produced by a rectangular magnet positioned outside the body. We take into account Newtonian fluid model, i.e. water, for the blood in the micro-vessel. All forces, e.g. magnetic, viscous drag and gravitational (the difference between weight of particles and buoyancy force) forces govern magnetic nanoparticle transport. The results show that the carrier particles are captured under the influence of a magnetic force. The equation of motion for transport of the carrier particles is solved using the MATLAB program and trajectories are traced. It is optimized that all particles are captured either near or at the centre of the magnet when the micro-vessel is at a distance 0.005 m from the magnet and the volume fraction $\beta_{vf} = 56\%$. The results are computed by using the MATLAB program.

KEYWORDS: Magnetic nanoparticles, Buoyancy force, Mathematical model and MATLAB program, Newtonian fluid model.

1. INTRODUCTION

Magnetic nanoparticles play a crucial role as drug carriers in the treatment of cancer. The therapy is very fruitful because it helps in the development of functional magnetic nanoparticles that are designed to target a specified tissue and it also reduces side effects. Magnetic carrier particles with surface-bound drug molecules

are injected into the vascular system upstream from the malignant tissue, and are captured at the tumour site via a locally applied magnetic field. Upon achieving a sufficient concentration the drug molecules are released from the carriers by changing many physiological conditions such as pH, osmolality, temperature, or different enzymatic activity, which helps in releasing the drug molecules from the carrier particle. Sometimes higher dosages can be applied for more effective treatment as the therapeutic agents are localized to regions of diseased tissue.

There have been many existing models predicting magnetic targeting of magnetic nanoparticles *in vivo* utilizing numerical methods to solve particle transport, such as the work by Furlani and Ng [6] who discussed mathematical models targeting in micro-vessels and the transport of magnetic nanoparticles and their capture. The effects of Newtonian and non-Newtonian characteristics of blood on magnetic drug targeting were studied by Shaw and Murthy [13]. Analysis of particle trajectories was studied by Heidsieck and Gleich [7]. A comprehensive model of magnetic particle motion during magnetic drug targeting was developed by Cherry *et al.*[2]. Kenjeres and Stuart [9] have used Lagrangian particle tracking to predict the trajectories of magnetic particles subject to magnetic force in flows. Recent trends in magnetic drug targeting was given by Sharma *et al.*[10-12]. Advances in drug delivery focusing on delivering the drug deep into the system by changing various suitable parameters and quantitative targeting maps based on experimental investigation into magnetic targeting that have formally been done. Trajectories of the nanoparticles are traced by solving the set of ordinary differential equation (ODEs) and a parametric analysis is done. They do not provide explicit functional relations for the particle capture and only a few account for Rheology of blood in micro-vessel.

An analytical model would be ideal for parametric analysis of magnetic targeting *in vivo*. Numerical calculations must be better equipped to deal with the problem when the system is numerically unstable. A detailed knowledge about the particle trajectories and influencing parameters is needed to design an appropriate magnetic field. The mathematical model designed [14-17] must be rich enough to capture fundamental behaviour and simple enough to be computational and useable for magnet design and control.

The greatest challenge in magnetic drug targeting is that sufficient quantities of the drug reach the desired site in the body. Here it is important to note that magnetic nanoparticle steering and trapping will not always have a 100% success rate and some particles will always be lost between the injection site and the target. The problem now is to increase the number of particles reaching the target and also to make them adhere for a longer time.

Magnetic nanoparticles transport in the micro-vessels is governed by several factors including (a) the magnetic force due to all field sources, (b) viscous drag, (c) particle-blood-cell interaction, (d) inertia, (e) buoyancy, (f) gravity, (g) thermal kinetics (Brownian motion), (h) particle-fluid interactions (perturbations to the flow field), and (i) interparticle effects that include magnetic dipole interactions, electric double-layer interactions and van der Waals forces. In this paper, we take into account the dominant magnetic, buoyancy,

gravity and viscous drag forces. We then ignore all other forces. Such present investigation is to develop a mathematical model for the quantitative description of magnetic nanoparticle trajectories in a micro-vessel.

2. RESEARCH OBJECTIVE

- (1) To analyse the movement of the particle upon the local flow condition and an applied magnetic field.
- (2) To predict particle trajectories using numerical field calculations.
- (3) To study the influential parameters with the help of trajectories.
- (4) To implement the model by solving stiff differential equations using the MATLAB program and also to trace the trajectories accurately.

3. THEORY AND METHODS

In the analytical study of travelling magnetic nanoparticles in the blood vessels, we take into account three forces, e.g magnetic, viscous drag and gravitational (the difference between gravity and buoyancy) forces which act on them. The equation of motion of the carrier particles are

$$m_{cp} \frac{d\vec{v}_{cp}}{dt} = \vec{F}_m + \vec{F}_f + \vec{F}_g \quad (1)$$

where m_{cp} and \vec{v}_{cp} are the mass and velocity of the carrier particle, and \vec{F}_m , \vec{F}_f and \vec{F}_g are the magnetic, drag and gravitational forces, respectively. The inertia term $m_{cp} \frac{d\vec{v}_{cp}}{dt}$ is often ignored for submicron particles as their mass are negligible [8]. So the final force balance is written as $\vec{F}_m + \vec{F}_f + \vec{F}_g = 0$.

In order to predict the model, it was assumed that each carrier particle has a radius R_{cp} and volume $V_{cp} = \frac{4}{3}\pi R_{cp}^3$. The force on the magnetic nanoparticle is predicted using an effective dipole moment approach in which the particle is replaced by an equivalent point dipole which is located at its centre. The forces on the dipole (and hence on magnetic nanoparticles) is given by

$$\vec{F}_m = \mu_f (\vec{m}_{p,eff} \cdot \nabla) \vec{H}_a \quad (2)$$

where $\mu_f \approx \mu_0$ is the permeability of the transport fluid, the effective dipole moment of magnetic nanoparticles $\vec{m}_{p,eff} = N_{mp} V_{mp} f(H_a) \vec{H}_a$, V_{mp} being the volume of magnetization of particles, N_{mp} being identical non-interacting magnetic nanoparticles embedded in the carrier particle, $N_{mp} V_{mp}$ being the total volume occupied by nanoparticles which can be represented in terms of a volume fraction $\beta_{vf} V_{cp}$ of the carrier particle, and $f(H_a)$ represents the function which depends on the magnetic field intensity of $H_a = |\vec{H}_a|$ (see also Refs. [3-6]),

$$f(H_a) = \begin{cases} \frac{3(\chi_{mp} - \chi_f)}{(\chi_{mp} - \chi_f) + 3}, & \text{for } H_a < \frac{((\chi_{mp} - \chi_f) + 3)}{3\chi_f} M_s \\ \frac{M_s}{H_a}, & \text{for } H_a \geq \frac{((\chi_{mp} - \chi_f) + 3)}{3\chi_f} M_s \end{cases} \quad (3)$$

Where $\chi_f \approx 0$ is the susceptibility of nonmagnetic fluid, $\chi_{mp} = \frac{\mu_{mp}}{\mu_0} - 1$ and μ_{mp} are the susceptibility and permeability of the particles, respectively, and $\mu_0 = 4\pi \times 10^{-7}$ H/m is the permeability of the air, and M_s is the saturation magnetization. In Eq.(3), \vec{H}_a is the (externally) applied magnetic field intensity at the centre of the carrier particle, where the equivalent point dipole is located outside the body. In this study, the analytical expressions obtained for the x - and y -components of the magnetic field intensity for a rectangular magnet are (see Ref. [2])

$$H_{ax}(x, y) = \frac{M_s}{4\pi} \left[\ln \left(\frac{(x+w)^2 + (y+d+R_v)^2}{(x+w)^2 + (y+d+R_v+2h)^2} \right) - \ln \left(\frac{(x-w)^2 + (y+d+R_v)^2}{(x-w)^2 + (y+d+R_v+2h)^2} \right) \right] \quad (4a)$$

$$H_{ay}(x, y) = \frac{M_s}{2\pi} \left[\tan^{-1} \left(\frac{2h(x+w)}{(x+w)^2 + (y+d+R_v+h)^2 - h^2} \right) - \tan^{-1} \left(\frac{2h(x-w)}{(x-w)^2 + (y+d+R_v+h)^2 - h^2} \right) \right] \quad (4b)$$

where the width and the height of the rectangular magnet are denoted by $2w$ and $2h$, respectively, and the distance between the surface of the magnet and the bottom wall d and the radius R_v of the straight circular micro-vessel as shown in Figure 1.

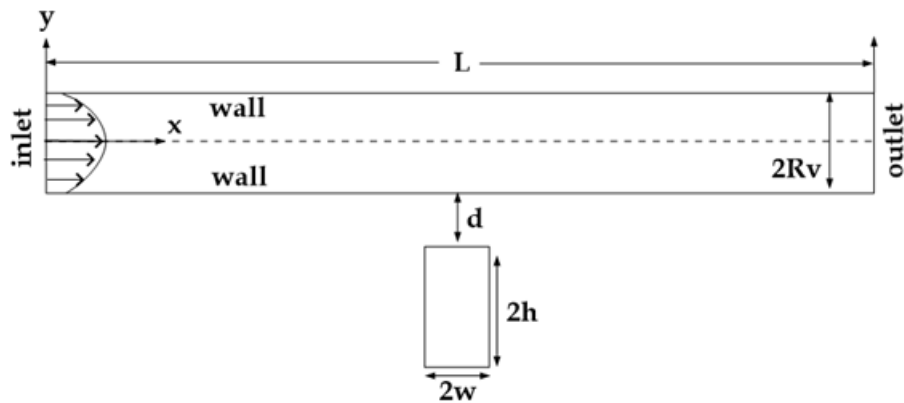


Figure 1 shows the geometry and reference frame for numerical analysis of magnetic nanoparticle transport in the micro-vessels as given by Kayal *et al.* [8].

We take into account nonmagnetic fluid and high susceptibility of the magnetic nanoparticle, i.e. $|\chi_{mp}| \ll 1$. Therefore, the magnetic force by substituting Eqs.(3) and (4a)-(4b) into Eq. (2) can be written as

$$F_{mx} = 3\mu_0 N_{mp} V_{mp} \frac{hM_s^2}{\pi^2} \left\{ (y+d+R_v+h) \ln\left(\frac{ak}{bc}\right) \left[\frac{(x+w)}{ab} - \frac{(x-w)}{ck} \right] + \tan^{-1} \psi \left[\frac{-(x+w)^2 + (y+d+R_v)(y+d+R_v+2h)}{ab} + \frac{(x-w)^2 - (y+d+R_v)(y+d+R_v+2h)}{ck} \right] \right\} \quad (5a)$$

$$F_{my} = 3\mu_0 N_{mp} V_{mp} \frac{hM_s^2}{2\pi^2} \left\{ \ln\left(\frac{ak}{bc}\right) \left[\frac{(\phi-h^2) - 2(x+w)^2}{(\phi-h^2)^2 + 4h^2(x+w)^2} - \frac{(\phi-h^2) - 2(x-w)^2}{(\phi-h^2)^2 + 4h^2(x-w)^2} \right] - 2(y+d+R_v+h) \tan^{-1} \psi \times \left[\frac{(x+w)}{(\phi-h^2)^2 + 4h^2(x+w)^2} - \frac{(x-w)}{(\phi-h^2)^2 + 4h^2(x-w)^2} \right] \right\} \quad (5b)$$

where

$$\begin{aligned} a &= (x+w)^2 + (y+d+R_v)^2 \\ b &= (x+w)^2 + (y+d+R_v+2h)^2 \\ c &= (x-w)^2 + (y+d+R_v)^2 \\ k &= (x-w)^2 + (y+d+R_v+2h)^2 \\ \phi &= (x+w)^2 + (y+d+R_v+h)^2 \\ \varphi &= (x-w)^2 + (y+d+R_v+h)^2 \\ \psi &= \frac{2h[(x+w)\varphi - (x-w)\phi - 2wh^2]}{(\phi-h^2)(\varphi-h^2) + 4h^2(x^2-w^2)} \end{aligned}$$

In our model we consider in addition to magnetic force also fluidic force acting on moving carrier particle in fluid medium. Its magnitude is determined by Stokes' law for the drag on a sphere with radius R_{cp}

$$\vec{F}_f = -6\pi\eta R_{cp} (\vec{v}_{cp} - \vec{v}_f) \quad (6)$$

where η and \vec{v}_f are the viscosity and the velocity of the fluid, respectively. Spherical magnetic nanoparticles

are moving in capillary which diameter is much greater than the size of particle. Velocity of flowing fluid in micro-vessel with radius R_v is determined from Navier-Stokes equation of Poiseuille-flow problem of Newtonian fluid with no-slip boundary condition [1]. In terms of average speed \bar{v}_f of flowing fluid in the blood vessel [3] we can write

$$v_f(r) = 2\bar{v}_f \left(1 - \left(\frac{r}{R_v} \right)^2 \right) \quad (7)$$

where $v_f(r)$ is velocity of fluid in axial direction of micro-vessel in distance r from its axis.

The gravitational force takes into account buoyancy and is given by

$$\vec{F}_g = V_{cp} (\rho_{cp} - \rho_f) \vec{g} \quad (8)$$

where ρ_{cp} and ρ_f are the density of carrier particle and fluid, respectively, and \vec{g} is the acceleration of gravity. Its value is 9.8 m/s^2 on negative y -direction. The gravitational force is the weight, i.e. the force due to mass $F_{mass} = V_{cp} \rho_{cp} g$, of carrier particle subtracted by the buoyancy force, $F_b = V_{cp} \rho_f g$.

The fluidic force components are determined from Eq.(4)

$$F_{fx} = -6\pi\eta R_{cp} \left[v_{cp,x} - 2\bar{v}_f \left(1 - \left(\frac{y}{R_v} \right)^2 \right) \right] \quad (9a)$$

$$F_{fy} = -6\pi\eta R_{cp} v_{cp,y} \quad (9b)$$

The equation of motion for a carrier particle travelling through a micro-vessel can be written in component from by substituting Eqs.(5a) - (5b), (7), (8) and (9a) - (9b) in the force balance $\vec{F}_m + \vec{F}_f + \vec{F}_g = 0$. In this case we take into account that the magnetic forces components are the x - and negative y -direction, we have

$$\begin{aligned} v_{p,x} = & \frac{2\mu_0\beta_{vf}R_{cp}}{3\eta} \frac{hM_s^2}{\pi^2} \left\{ (y+d+R_v+h) \ln\left(\frac{ak}{bc}\right) \left[\frac{(x+w)}{ab} - \frac{(x-w)}{ck} \right] \right. \\ & + \tan^{-1} \psi \left[\frac{-(x+w)^2 + (y+d+R_v)(y+d+R_v+2h)}{ab} \right. \\ & \left. \left. + \frac{(x-w)^2 - (y+d+R_v)(y+d+R_v+2h)}{ck} \right] \right\} + 2\bar{v}_f \end{aligned} \quad (10a)$$

$$\begin{aligned} v_{p,y} = & \frac{-\mu_0\beta_{vf}R_{cp}}{3\eta} \frac{hM_s^2}{\pi^2} \left\{ \ln\left(\frac{ak}{bc}\right) \left[\frac{(\phi-h^2)-2(x+w)^2}{(\phi-h^2)^2+4h^2(x+w)^2} - \frac{(\phi-h^2)-2(x-w)^2}{(\phi-h^2)^2+4h^2(x-w)^2} \right] \right. \\ & + 2(y+d+R_v+h) \tan^{-1} \psi \left[\frac{(x+w)}{(\phi-h^2)^2+4h^2(x+w)^2} - \frac{(x-w)}{(\phi-h^2)^2+4h^2(x-w)^2} \right] \left. \right\} \\ & - \frac{2R_{cp}^2}{9\eta} (\rho_{cp} - \rho_f) g \end{aligned} \quad (10b)$$

4. RESULTS AND DISCUSSION

The study of the transport of the magnetic nanoparticles is done by considering carrier particle with radius 300 nm and density $\rho_{cp} = 5,000 \text{ kg/m}^3$. A rectangular magnet of height $h = 50 \text{ mm}$, width $W = 25 \text{ mm}$ and with saturation magnetization $M_s = 10^6 \text{ A/m}$ is positioned outside the blood vessel to create the applied magnetic field. The distance d between the surface of the magnet and the bottom wall of the blood vessel is varied to study the trajectories of the nanoparticle. The radius of the micro-vessel $R_v = 75 \mu\text{m}$ and an average blood flow velocity $\bar{v}_f = 10 \text{ mm/s}$. It is assumed that the viscosity of blood η is $3.2 \times 10^{-3} \text{ N.s/m}^2$ and the density ρ_f is $1,060 \text{ kg/m}^3$.

The present result with the volume fractions $\beta_{vf} = 20\%, 56\%$ and $d = 5, 10, 15, 20 \text{ mm}$. The plot of the radius position y of carrier particle is normalized with respect to the micro-vessel radius, R_v and the axial position, x is normalized with respect to the length of the micro-vessel, L as shown in Figure 2. We found that the trajectory of the carrier particle observed, has a tendency to be captured by the magnetic force, increases in volume fraction of the magnetic particle. From condition, $N_{mp}V_{mp} = \beta_{vf}V_{cp}$, it is clear that due to volume fraction, the total volume of the magnetic particles increases, which increases the magnetic force between the magnet and the carrier particle.

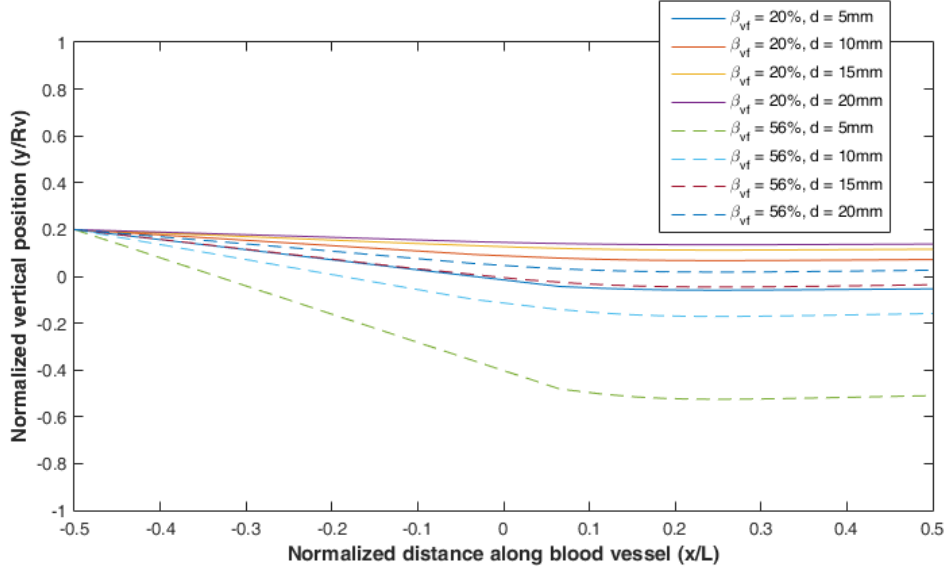


Figure 2 Trajectories of carrier particles in a micro-vessel for two volume fractions $\beta_{vf} = 20\%, 56\%$ and $d = 5, 10, 15, 20 \text{ mm}$, $R_{cp} = 500 \text{ nm}$

Trajectories of carrier particles in a micro-vessel for $\beta_{vf} = 56\%$, $d = 5 \text{ mm}$ and the initial position of inlet carrier particles at $y_0 = \pm 0.2R_v, \pm 0.4R_v, \pm 0.6R_v$ is plotted as shown in Figure 3. We found that

the inertial positions of inlet carrier particles are closer to the bottom wall of micro-vessel. The tendency of carrier particles captured by the magnetic force increases.

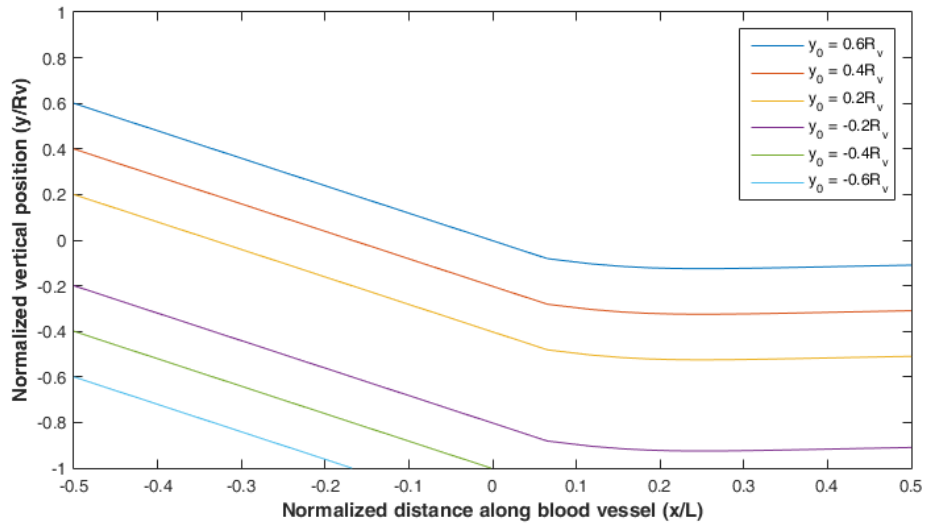


Figure 3 Trajectories of carrier particles in a micro-vessel for the volume fractions $\beta_{vf} = 56\%$, $d = 5$ mm and the inertial position of inlet carrier particles at $y_0 = \pm 0.2 R_v$, $\pm 0.4 R_v$, $\pm 0.6 R_v$, $R_{cp} = 500$ nm.

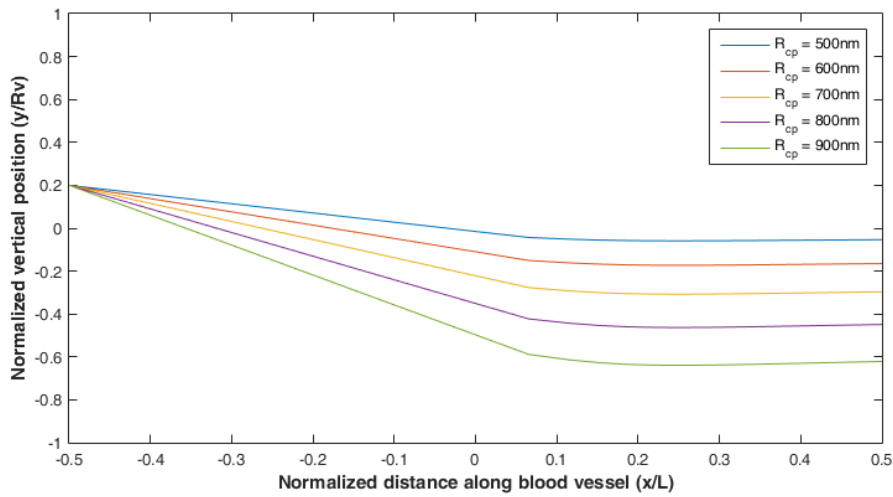


Figure 4 Trajectories of carrier particles in micro-vessel for different value of carrier particle radius R_{cp} ($d = 5$ mm and $\beta_{vf} = 56\%$).

The trajectories of the carrier particle for the various radius of the carrier particles observed has a tendency to be captured by magnetic force when the radius of the carrier particles increase as shown in Figure 4.

The gravitational force from Eq.(8), we separately evaluate it as the force due to mass

$$\begin{aligned} F_{mass} &= \rho_{cp} \frac{4}{3} \pi R_{cp}^3 g \\ &= 2.57 \times 10^{-2} \text{ pN} \end{aligned} \quad (11)$$

and the buoyancy force

$$\begin{aligned} F_b &= \rho_f \frac{4}{3} \pi R_{cp}^3 g \\ &= 0.51 \times 10^{-2} \text{ pN} \end{aligned} \quad (12)$$

These forces are typically an order of magnitude smaller than the applied magnetic force. We then ignore these forces in analysing the motion of submicron particles, as it is usually much weaker than the magnetic force.

5. CONCLUSION

The results of our studies show that a mathematical model has been developed for the transport of magnetic nanoparticles in the blood vessel under the influence of a permanent magnet placed outside and trajectories traced. Magnetic, viscous drag, gravitational (the difference between weight of particles and buoyancy force) forces which influence the transport of the particle motion are considered. It is optimized that all particles are captured either near or at the centre of the magnet when the blood vessel is at a distance 0.005 m from the magnet and the volume fraction $\beta_{vf} = 56\%$. We finally found that the gravity and the buoyancy forces are ignored when analysing the motion of submicron particles, as they are usually much weaker than the magnetic force. Such mathematical model is not enough quantitative description for magnetic nanoparticle trajectories in realistic blood micro-vessel, i.e. the behaviour of blood as Herschel-Bulkley fluid (Non-Newtonian fluid) which will be considered in future mathematical model.

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**The Enhancement of Students' English Speaking Ability
Through the Use of Face-to-Face Teacher-Student Conferencing:
A Case Study of an Online Learning Course in a Private University in Thailand**

Piboon Sukvijit Barr, Ph.D.

English for Business Communication, School of Liberal Arts, Sripatum University

E-mail: piboon.su@spu.ac.th

ABSTRACT

This paper aims to explain the positive effects of the implementation of face-to-face teacher-student conferencing on students' English speaking ability in an online English presentation course offered in the first semester of an academic year 2560. Both quantitative and qualitative data derived from the English speaking test, teacher-student conference questionnaire, teacher-student conference interview were described in detail. Four students from the English Business Communication major participated in this study. They were purposively selected as the participants in a 10-week quasi-experimental study. The research findings revealed that face-to-face teacher student conferencing enhanced their English speaking ability, particularly their pronunciation and vocabulary. In addition, they had also gained interest and motivation to learn, and the quality of their assignments met the requirements set by the instructor. This study suggests that for Thai students, especially those with low to medium English ability and studying at a higher education-level, nurturing environment was necessary in online learning, where self-study competes with many other distractions.

KEYWORDS: Face-to-face teacher-student conferencing, Assessment conference, English speaking ability, Online English course

1. Introduction

It is claimed that teacher-student conferencing is one of the powerful tools that enhance the relationship between teachers and students, which in turn, results in students' greater learning performance and higher empowerment and student engagement (Romano, 1987; Spender, 2015). The practice of teacher-student conferencing is based on two fundamental concepts, namely social constructivism and the zone of proximal development (ZPD) and scaffolding.

1.1 Social Constructivism

Social constructivism concerns the learning process which emphasizes learners integrating into a knowledge community. As Mergel (1998) stated, students became important in assessing their own learning

progress. This learning progress is essentially based on the social interaction between learners and those who help them to understand ideas or concepts or to perform or think more effectively and creatively (Atherton, 2005; Guerra, 2004). Social interactions affect cognitive development, the ZPD, and the role of scaffolding, which results in the greater performance and learning outcomes of learners.

1.2 The Zone of Proximal Development (ZPD) and Scaffolding

The Zone of Proximal Development, according to Vygotsky (1978), refers to the distance between what learners can do independently and what they can do with the assistance of a more capable person. Scaffolding refers to the assistance of teachers to their students in a particular task. This assistance is temporary. Once the students excel at a certain skill or complete the task, the teacher will allow them to complete similar tasks alone. (Hammond & Gibbons, 2001, p. 3, as cited in Simpson, 2011).

These two fundamental principles can be found in many forms of teaching and learning activities. One of them is teacher-student conferencing.

1.3 Teacher-Student Conferencing

Teacher-student conferencing can be divided into three types, namely advice conference, reflecting conference, and assessment conference (Spencer, 2015). These three types have different functions in providing assistance to the students. Firstly, advice conference aims for the teacher to provide feedback to the students in specific areas of their assigned tasks that is yet to be improved. In this type, students play an active role in asking questions for feedback while the teacher primarily tells the student what to do and how to think better. On the contrary, reflection conference aims for the teacher to guide students toward self-reflection. In this type, the teacher plays an active role while the students act in the passive manner by answering questions and reflecting on their own learning. Similarly, in the assessment conference, the teacher is an active agent asking about student's progress toward specific standards. However, its goal is different from that of the reflection conference. Students would judge their own mastery of content.

English Speaking Ability and Language Instruction

Speaking is the productive skill which is used to determine the speaker's language ability. There are four fundamental elements of speaking which include speaker, the listener, the message and the feedback. When we speak we produce meaningful texts. Speaking can be called as oral communication which is described as ability to express thoughts, report acts, or converse a sequence of ideas accurately and fluently (Ladouse, 1991). Thus, speaking ability is the ability to express ideas verbally. It is a process that concerns an interaction between two sides.

When it comes to English instruction, particularly in the speaking skill, there are a number of approaches which include many elements that teachers need to consider. Based on Stoller & Grabe (1997), they suggested the design of lesson plans and activities and the theories of language teaching and learning.

2. Research Objective

(1) Investigate the effect of face-to-face teacher-student conferencing implementation on students' English speaking ability in the online course.

(2) What are the opinions of the students on the implementation of face-to-face teacher-student conferencing?

3. Research Framework

After reviewing the literature, the present research conceptual framework is as shown in Figure 1:

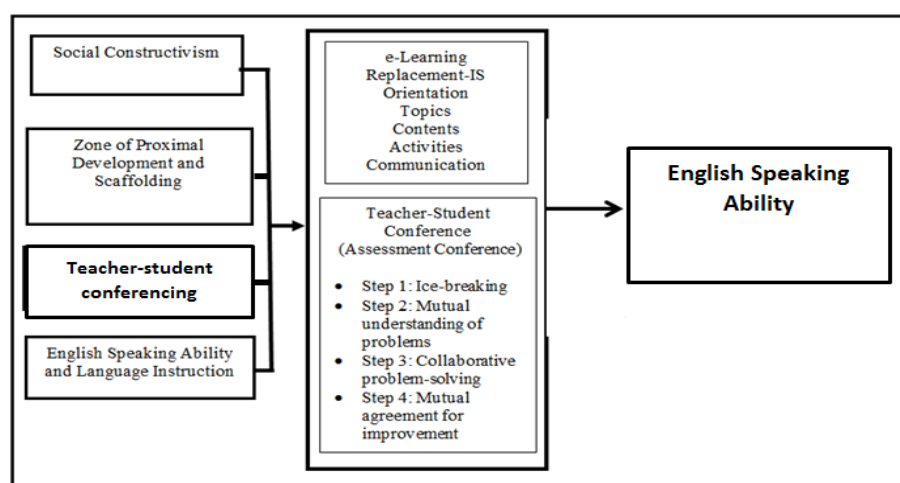


Figure 1: Research Conceptual Framework

4. Research Methodology

4.1 Research Design

The present study adopted the quasi-experimental research design employing a mixed-methods approach which aimed to investigate the implementation of a face-to-face teacher-student conferencing to enhance the English speaking ability of students in the EBC332 Business Presentation course offered as an online IS-Replacement. Specifically, qualitative approach was used to triangulate with the data derived from the quantitative results. It also employed a non-random sampling design with the purposive sampling technique. Face-to-face teacher-student conferencing was employed over the three-month period of this online course. Pretest-posttest time series design was utilized to measure students' English speaking ability.

4.2 Population and Sample

The population of this study was four female students, aged between 20 and 21, majoring in English for Business Communication, the Faculty of Liberal Arts, Sripatum University, Thailand. They were enrolled in the EBC332 Business Presentation course in the academic year of 1/2560 as an online IS-Replacement course as their last course before graduation. They later participated in a semi-structured interview employing a focus-

group interview technique. The course concentrated on the principles and methods of business presentation, selecting the topics, collecting the information, organizing the material: Parts of the presentation involved the use of audio-visual aids effectively. In this study, the assessment conference type which focused on the mastery of standards was adapted from Arbur, 1983; Zelnick, 1983; and Ongphet, 2013.

4.3 Variables

The independent variable of this study was teacher-student conference, while the dependent variable was English speaking ability.

4.4 Research Instruments

In this study, four research instruments were utilized, namely English speaking test to assess students' English speaking ability, teacher-student conference form, teacher-student conference questionnaire, and teacher-student conference interview protocol. English speaking test, which was based on the standardized criteria of IELTS Speaking band descriptors (public version), was used to assess students' English speaking ability. The teacher-student conference form was obtained and analyzed to triangulate with the quantitative data. In addition, the 5-point scale teacher-student conference questionnaire, and the teacher-student conference interview protocol were utilized to explore students' opinions of teacher-student conferencing in the online IS-Replacement course. All of the research instruments were validated and assessed by six experts in the fields of English instruction and assessment.

4.5 Data Collection

The English speaking test was administered five times before, during and after the implementation of two teacher-student conferences. For the teacher-student conference form, three face-to-face teacher-student conferences were administered. The first conference was conducted by the end of Week 4 after conducting the second English speaking pretest followed by the second and the third conferences by the end of Week 6 and Week 8, respectively. In order to conduct each conference, students had to complete a teacher-student conference form prior to attending the conference. The stage of distributing the teacher-student conference questionnaire and conducting the teacher-student conference interview were conducted in Week 11.

4.6 Data Analysis

The English speaking test and the teacher-student conference questionnaire were analyzed by using Descriptive statistics (frequency and percentage) while the teacher-student conference form, questionnaire and interview protocol were analyzed by means of content analysis, coding, and categorization.

5. Research Findings

5.1 The results of the first research question 1, which was "To what extent does face-to-face teacher-student conferencing enhance students' English speaking ability in the online course?" can be described as follows:

The results of the pre- and post-test scores of students' English speaking ability were analyzed after the implementation by means of descriptive statistics (\bar{X} , SD).

5.1.1 Quantitative Findings

Speaking tests, which were adapted from the IELTS exam, were administered by the researcher who asked questions the students on both familiar and unfamiliar topics. Then, students' speaking performances were assessed by a native speaker who had been trained as an assessor for English speaking proficiency. From the total score of 9, Table 1 reveals that students' speaking ability had increased after the first teacher-student conference and continued increasing after the second conference and the third conference.

Table 1: Overall speaking scores before and after Teacher-Student conferencing

No. Speaking Test	Fluency & Coherence		Lexical Resource		Grammatical range & accuracy		Pronunciation	
	\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.
Test 1	3.25	0.96	2.50	0.58	3.00	0.82	3.75	0.50
Test 2	2.50	1.00	2.75	0.50	2.75	0.50	3.00	0.82
Test 3	3.75	0.50	3.00	0.82	3.50	0.58	4.50	0.58
Test 4	4.00	0.82	3.00	0.82	4.00	1.15	5.00	0.82
Test 5	3.75	0.96	4.00	0.82	3.75	0.96	5.25	0.96

The data from Table 1 reveal that almost all students' English ability had improved. Specifically, lexical resource had increased continuously after each teacher-student conferencing followed by pronunciation. Figure 2 can perhaps project the students' improvement of their English ability. It shows that the implementation was effective because students' speaking scores had marginally increased after the second test, which was the time students participated in the first teacher-student conference.

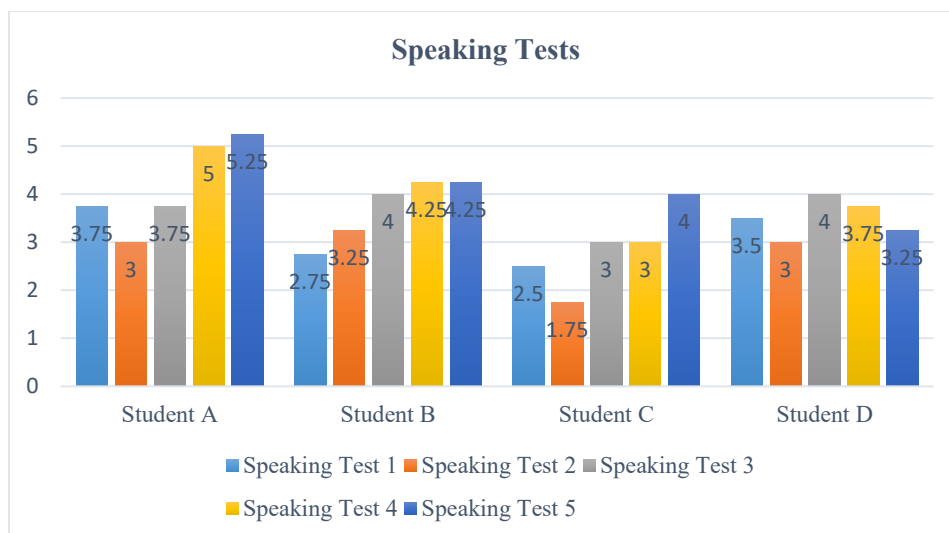
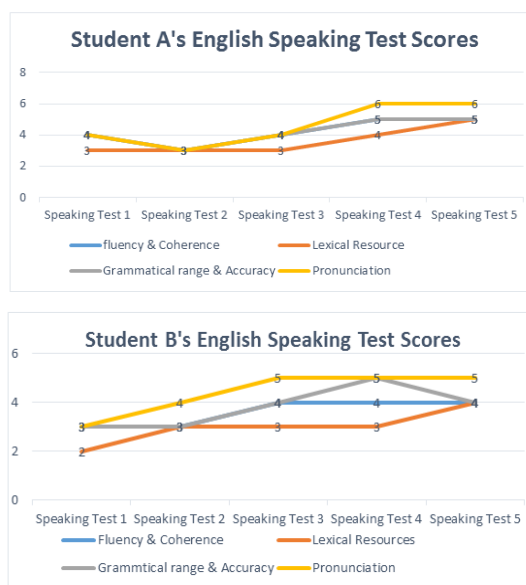


Figure 2: Students' speaking ability before and after Face-to-Face Teacher-student Conferencing

The overall scores show the improvement of students' speaking ability after the implementation. However, Student D's performance had unexpectedly decline after the second and the third conferences due to the lack of self-regulation. Figure 3 demonstrates each student's speaking ability shown in various aspects, namely fluency and coherence, grammatical range and accuracy, lexical resource, and pronunciation.



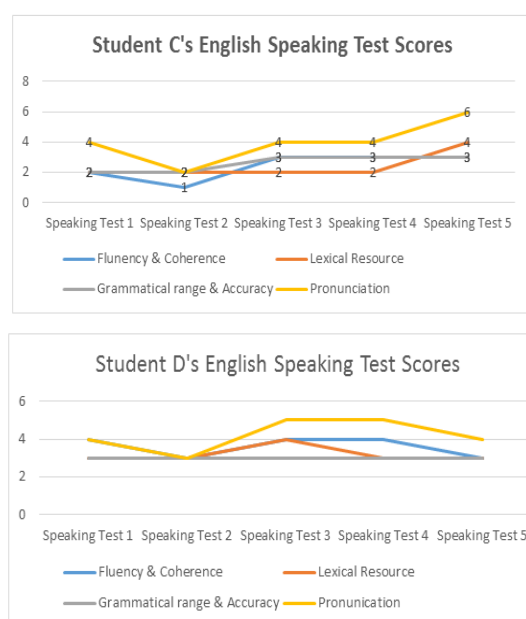


Figure 3: Students' Speaking Ability Progress after Teacher-student Conferencing

5.1.2 Qualitative Findings

Based on students' conference logs, open-ended questionnaire, and focus-group interview, students believed that teacher-student conferencing was very essential to them in order to comprehend content, complete the tasks and accomplish the course. Especially, they believed that their speaking skill was enhanced to a certain level. Based on both quantitative and qualitative results, students thought that they had acquired more vocabulary and improved more pronunciation skill. In addition, the results derived from the qualitative analytical program Alasti.7 revealed co-occurrences of all the factors and found that face-to-face teacher-student conference enhanced student's English speaking ability and learning engagement. Moreover, three essential issues which co-occurred were that (1) students had a misconception of the course as online IS-Replacement; (2) they did not know exactly how to operate all of the functions on the e-learning platform; (3) they lacked-self-discipline and self-regulation. All of these issues obviously affect their English speaking ability.

5.2 The results of the second research question, "What are the opinions of the students on the implementation of offline teacher-student conferencing?" can be described as follows:

5.2.1 Quantitative Findings

Regarding the students' opinion on their speaking ability, the results showed that two of them agreed that their English ability was enhanced at a high level ($\bar{X} = 4.25$ and 3.75). The other two students thought that their English ability was increased at a moderate level ($\bar{X} = 3.00$ and 3.25).

5.2.2 Qualitative Findings

Based on the focus-group interview, students believed that their speaking skills had improved to a certain level. One interesting comment from the students was that their speaking ability was enhanced temporarily only during the preparation and rehearsal of their oral presentations. One student said,

I think my speaking performance was better than before only during the oral presentations because I totally concentrated on the script. However, after the presentations, I think my speaking ability declined.

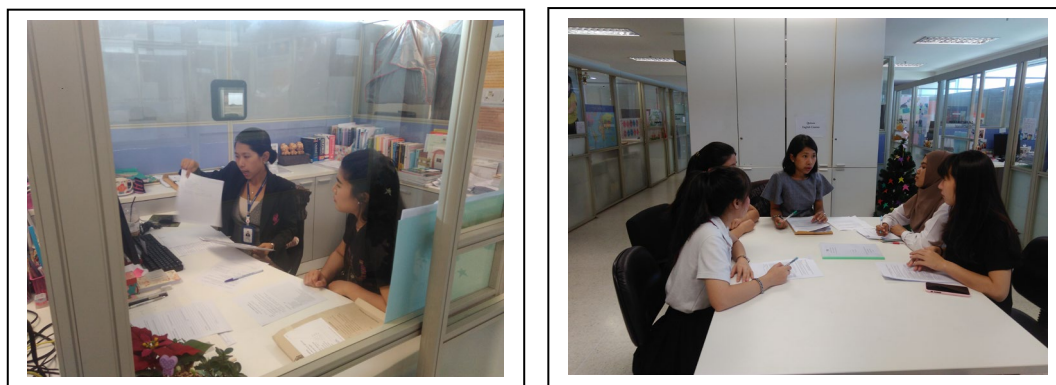


Figure 5: The First Face-to-Face Teacher-Student Conference and a teacher-student focus-group

To conclude, face-to-face teacher-student conference enhanced students' English speaking ability in the online course of EBC332 Business Presentation, especially in their pronunciation. In addition, it greatly enhanced students' learning engagement in the online course. They have positive feedback toward the implementation and highly recommended it in all e-learning IS-Replacement courses.

6. Discussion

The research findings have proven that learning is the process by which learners are integrated into a knowledge community (Mergel, 1998, as cited in Simpson, 2011). Online learning, in the present study, required a great deal of learning process. In fact, language courses are skill-based, which require practice and feedback for improvement. The present study indicated the achievement of face-to-face teacher-student conference on students' English speaking ability. This can be created through interactions and engagement in social activities between the instructor and the students, which refers to social process. For Thai students, especially at a higher education level with low to medium-level English ability, nurturing environment is necessary. In an online learning, meeting face-to-face with the instructor would benefit students in many ways, especially in the relationship with the lecturer.

In addition, students were well supported and encouraged through the process of conferencing, which started with positive feedback on students' work, followed by understanding their problems, collaboratively

solving the problems, and finally agreeing to achieve the required goals. This resulted in the enhancement of students' English speaking ability. Teacher-student conferencing helped students to develop trust in the teacher and feel that they were not left alone in the electronic learning space. These research findings also revealed students' positive attitudes towards the instructor. Yeh's (2016) study also showed that students put more effort on their assignments to get better scores, which resulted in the enhancement of students' English writing ability.

Scaffolding also played a crucial role in the online learning of the present study. It led significantly to self-regulation and self-motivation. The present study reaffirmed that conference sessions provided assistance to students and maximized their existing levels of understanding or current competence.

7. Suggestions

(1) Pedagogical Implications

It is suggested that teacher-student conferencing should be integrated in online courses. It is one of the key elements to facilitate Thai student's learning engagement and potentially increase their English speaking performance. In an online course, it is both the teacher and students' responsibility to mutually drive the course. Without this mutual engagement, online learning can only be viewed as nothing but a sink or swim education system. It should be noted that there is no set number of teacher-student conferencing sessions per course. Instructors have to consider the number of conferences based on students' needs and the pedagogy used. The researcher believes that this model can also be applied to other English courses and courses across disciplines.

(2) Recommendations for further studies

This study generates a discussion for future investigations such as a study with a large class of students who have different levels of English proficiency. Furthermore, a study on the retention of students' English ability in an online course is also interesting for investigation.

(3) Limitation of the study

It should be kept in mind that the small sample size and the student demographics and the level of English proficiency in this study might be the limitation of this study. However, the approach of teacher-student conferencing presented here, where the steps of conferencing, course design, course content were carried out in the controlled manners, can be employed as a model for, or adapted to, other online courses.

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A STUDY ON ENGLISH COMMUNICATION SKILLS FOR GRADE3 STUDENTS BY ADDING “ING” TO THE BASE VERB BY USING FLASHCARDS AND GAMES

Phatcharin Thonaphalin

Curriculum and Instruction/Faculty of Education/North Bangkok University

E-mail: phatcharin.tho@northbkk.ac.th.

Benjarat Ratchawang, PhD.

Curriculum and Instruction/Faculty of Education/North Bangkok University

E-mail: Benjarat.ra@northbkk.ac.th.

ABSTRACT

The purposes of this research were to find the level of improvement of English communication skills from prathom3 students by using flashcards and games. The sample of this research consisted of 25 prathom3 students from Chindanukul school in the first semester of 2018. The students were selected by simple random sampling. The research instruments were used (1) English lesson plan based on the learning management with flashcards and games. (2) English communication skills assessment. (3) Evaluation form of order fulfillment test. The statistics used in the analysis were percentage, Mean (\bar{X}), Standard Deviation (SD.) and Dependent sample t-test.

The findings of this study was found that there was a statistically significant difference between learning achievement in English for communication skills for prathom3 students of Chindanukul school, by using flashcard and games. Improvement from 74.22 to 83.06 percent. Which means that learning management from flashcard and games were at a very effective at .05 level.

KEYWORDS: English communication skills, learning management with flashcards and games

1. Introduction

English language is essential in everyday use, as communication is extremely important to further education knowledge in future career. To understand cultures and demographic differences of the world. To be able to understand all ethnicities and differences in religious cultures, ways of life, economies through to the government policies. To understand the nature and the nurture of environments. Thus enabling communication to be made easier and possible. All countries have different tongues and dialects but use English to come together

as one. It is important that methods of teaching are structured in ways which will purposely improve verbal, reading and writing skills. Being able to communicate in an accurate manner so all data or points are not lost because of misunderstandings. Essentially students must be able to pronounce words properly. Students must be able to write appropriately according to their meanings. There are majors problems, consisting of (1) Lack of practice (2) Lack of knowledge (3) Problems in a method of teaching. Apart from these problems, students need to have a secure foundation in English such as grammar. All needed to get good at the start. Understanding words can be put into phrases as suggested by Stewick in his research (Chamot, 2005). Vocabulary is a necessity. Upon results compiled from examination, grade 6 students of Chindanukul school had an average of 48.60, lowest in 1.2 for language communication skills (O-net: 2017). By taking part in practical activities, students are able to enjoy learning English more. Plus the bonuses for future fulfillment to acquire a stranglehold on English as a language. A fun atmosphere will cater to students searching for knowledge (Leslie Ellish, 2018). Theoretical ways of Learning can be boring to children especially with a short concentration span. By imposing flashcard and games as a way of learning, they provide enjoyable activities to learn and be more focus consistently. This to coincide (Samnao Sripramong, 2004).

Via using flashcard and games make learning more enticing and fun for students to learn. Consistent use make students more familiar and therefore easier to remember. Also, an important aspect is for teachers to make a fun and lively environment adding to students' pleasure. Games used in classes can be beneficial on an otherwise boring class (Kusaya Saengdet, 2002). Games help children think strategically, solve problems, creatively and develop social skills, such as following rules, playing with others and taking turns. Children love to play all kinds of games and often make up their own rules to familiarize games.

In my conclusion, flashcards and games are fully needed in educational system whereby students need to grasp firmly English. There have been many studies showing the benefits of flashcard and games used as a learning and education tool.

2. Research Objectives

(1) The study of English communication skills for prathom 3 students of Chindanukul school by adding “ing” to the base verb in Present Continuous Tense by using flashcards and games.

(2) To compare English communication skills by adding “ing” to the base verb in Present Continuous Tense for prathom 3 students before and after using learning management with flashcards and games.

3. Research Framework

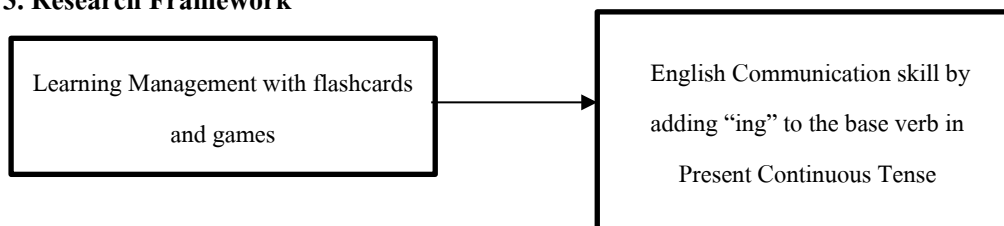


Figure 1 Research Framework

4. Research Methodology

4.1 Research Design

This research is used quasi-experimental research that designs in one group pre-test post-test.

Table 1: One group pre-test post-test Design

Pre-test	Treatment	Post-test
T_1	X	T_2

T_1 represents Pre-test
 T_2 represents Post-test
X represents English Learning Management with flashcards and games

4.2 Population and Sample

The population of this research were prathom3 students of Chindanukul school. There are 2 classrooms with 50 students. The sample consisted of 25 prathom3 students in grade 3/2 in the first semester of 2018. The sample was selected by simple random sampling.

4.3 Variables

Independent Variable: Learning Management with flashcards and games

Dependent Variable: English Communication skills by adding “ing” to the base verb in Present Continuous Tense

4.4 Research Instrument

(1) English lessons plan based on the learning management with flashcard and games.: It has been constructed from the core concept of the Basic Education Curriculum 2008 until specifying learning area from New Express3 Book. There are 10 learning units with 20 hours, then presented to 3 experts to examine suitability. Results of learning management plan evaluation were 4.64, overall was at a good level.

(2) English Grammar Skill Assessment: The author constructed the test that comprised of 20 pictures to match with vocabulary after presented it to 3 experts to examine suitability. A result of suitability was 4.32.

(3) English evaluation form of order fulfillment: The implementation of the order fulfillment evaluation form order 10 command statement. This is a measure of the scale of valuation (Rating scale) by setting the level to 5 levels. They are the most, a lot, average, not much and none. After, offered to 3 experts to assess for accuracy and suitability. The average was 4.28, means the highest level.

4.5 Data Collection

Sample students do the pre-test that is English communication skill test and Evaluation form of order fulfillment, and then continue to instruct according to the learning management plans with flashcards and games. There are 10 plans, 20 hours, then students do the posttest by using same as a pretest.

4.6 Data Analysis

Data were analyzed with descriptive statics such as percent, average and standard deviation (SD.) Furthermore, t-test for dependent samples was used to test either a change or a difference in means between pre-test and post-test.

5. Research Findings

(1) The score of both pretest and posttest were informed to the students. The results of scores are shown in table 2.

Table 2: Results of Pre-test and post-test

Student	Pretest score (70)	Percent	Posttest (70)	Percent	Level
1	56	80.00	59	84.28	Excellent
2	57	81.42	61	87.14	Excellent
3	60	85.71	63	90.00	Excellent
4	53	75.71	58	82.85	Excellent
5	54	77.14	58	82.85	Excellent
6	56	80.00	65	92.85	Excellent
7	65	92.85	63	90.00	Excellent
8	57	81.42	62	88.57	Excellent
9	56	80.00	62	88.57	Excellent
10	43	61.42	52	74.28	Good
11	52	74.28	59	84.28	Excellent
12	56	80.00	65	92.85	Excellent

Table 2 (Continued)

Student	Pre-test score (70)	Percent	Post-test (70)	Percent	Level
13	50	71.42	57	81.42	Excellent
14	49	70.00	54	77.14	Good
15	53	75.71	59	84.28	Excellent
16	53	75.71	62	88.57	Excellent
17	49	70.00	54	77.14	Good
18	43	61.42	52	72.48	Good
19	53	75.71	59	84.28	Excellent
20	43	61.42	50	71.42	Good
21	41	58.57	50	71.42	Good
22	53	75.71	60	85.71	Excellent
23	51	72.85	59	84.28	Excellent
24	43	61.42	51	72.85	Good
25	53	75.71	61	87.14	Excellent
Overall Average	1,299	74.22	1,455	83.06	Excellent

From table 2, learning achievement in English grammar for grade3 students of Chindanukul School using learning management with flashcard and games. Post-test scores are higher than pre-test scores. Post-test scores were 83.06 percent which was excellent level. According to the assumptions set.

Table 3: Comparison pre-test and post-test scores

Testing	N	Full score	\bar{X}	SD.	df.	T	p-value
Pre-test	25	70	51.92	5.86	24	11.99	.000
Post-test	25	70	58.20	4.58			

From table 3, learning achievement in English Communication skills by correct use of the base verb in Present Continuous Tense after using learning management with flashcards and games was statically significant higher than before using learning management with flashcards and games at the .05 level.

6. Discussion

This research is a study of English Communication skill for prathom3 students of Chindanukul school using learning management with flashcards and games. The results can be discussed as follows:

(1) To study on the English communication skill for grade3 students of Chindanukul school by adding “ing” to the base verb in Present Continuous Tense by using flashcards and games. The result of the experiment found that English communication skills , a post- test score was 83.06 percent. It was an excellent level which based on the assumption. This may be because students have retention in learning English. Due to learning management with flashcards and games can enhance a better understanding of English communication skill, and also developed their listening , speaking , reading and writing.

(2) In comparing English skills of correct use of the base verb in Present Continuous Tense. We found that they were significantly higher than before using learning management with flashcards and games at the .05 level, possibly because of teaching by using flashcards and games could help children movement of their body parts, this allows students to achieve higher levels of vocabulary achievement than regular instruction. This is consistent with research by Preecha (Preecha ,2003), studied " A study on a comparative study of learning achievement and persistence in learning English vocabulary" of grade6 students during gameplay with regular classes. The research found that achievement of students learning from vocabulary learning games was statically significant higher than before using learning management with flashcard and games at the .05 level, and students who use the game have more durability in learning English vocabulary than students in the normal course. It complies with the research of Wannporn (Wannaporn, 1995), studied “A comparative study on achievement and retention in learning English vocabulary” of grade6 number of 60 people, divided into a control group and experimental group. Groups of 30 people found that students who learn from teaching by using this practice that does not have game statistically significant at the .01. Providing interesting lesson and provides students with higher academic achievement, and this is consistent with research by Orcutt (Orcutt, 1972), studied “The effect of using English teaching games on 3 kindergarten students”. Group 1 gave the students a choice of games. Group 2 teacher choose the game. Group3 taught normally found that the group selected the game itself to have the ability to learn better than all groups.

7. Suggestion

7.1 Limitation

(1) Management to learn by using flashcards, teachers should select activities for students to be interactive activities to provide students with the opportunity to use the language to communicate better.

(2) By learning games, teachers should organize learning activities that play in order to enhance the learning experience.

7.2 Recommendation for future research

(1) There should development of English basic skills , listening, speaking, reading, and writing by using flashcards and games in class.

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A Learning Achievement Development of “Foreign Language Words in Thai Language” by Using Programmed Instruction for Ninth Graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30

Sirisuda Thanawanitchayakul¹, Somsak Janthadee²

^{1,2} **Loei Rajabhat University**

¹E-mail : papim.kk@gmail.com, ²E-mail : pdungthebest@gmail.com

ABSTRACT

The purposes of this study were (1) to develop learning achievement of “Foreign Language Words in Thai Language” by using programmed instruction for the ninth graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30 according to the efficiency criteria of 80/80, and (2) to compare between pre-test and post-test of those students. The sample consisted of 12 ninth graders studying in the first semester of academic year 2018. Three types of instruments were applied; (1) programmed instruction, (2) five lesson plans, and (3) multiple-choices learning achievement test. Descriptive statistics, mean and standard deviation, were applied including the efficiency criteria of E1/E2 and inferential statistic, dependent sample t-test, was also applied.

The findings were as follows:

1. Programmed instruction for the ninth graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30 met the efficiency criteria (E1/E2) of 81.67/82.22 which was higher than the expected criteria of 80/80.
2. The posttest score of the learning achievement test was statistically and significantly higher than the pretest score at 0.05 level.

Keywords: Foreign Language Words, Thai Language, Programmed instruction, Learning Achievement

1. Background

Today, language has changed overtime. There are borrowed words from other languages which result in language changes in many perspectives. According to Kingkham (2007), when foreign words were used in Thai language, the characteristic of the language changed from the original such as additional syllables, more synonyms, different unit of final consonants and the structure of Thai language changed. Jittaviriyapong (2003) also mentioned that borrowing many foreign words to use in Thai language influenced Thai language in 2 ways;

phonology such as consonant sounds, final consonant sounds, homophone or synonyms, and vocabulary and words such as synonyms, misspelling due to the pronunciation comparison, change of the structure of Thai language, the mixing of Thai and English words which caused misuse of language.

The researcher did a teaching practice at Khonsanwittayakhom School, Chaiyaphum Secondary Educational Service Area Office 30, by arranging learning activities in Basic Thai Language subject for ninth graders. These students did the pretest and exercises and it was found that they could not distinguish foreign languages used in Thai language. This meant that the students could not tell if the word was the loanword such as the word “Sanya” is a loanword from Pali, and “Bampen” is a loanword from Khmer. Due to the students didn’t understand and had no principle to remember or to sort out a loanword from Thai language, the learning achievement about foreign words in Thai language was not as good as it should have been.

Therefore, it is very important to adjust a learning process in order to be suitable to the changing society. Efficient learning should come from teaching materials which meet the needs of learners and stimulating teaching activities should be prepared. Moreover, to raise student’s awareness in the value of learning by using ready-made lessons to improve the teaching must be concerned to lead learners to the effective learning and help them develop to their maximum capacity. Therefore, ready-made lessons are the teaching materials that the students can study by themselves. There is no limitation for the students in terms of time and place. They are interesting and can be used according to each students’ capacity. The lessons will be a big push, and they response quickly which will increase the learning efficiency (Ruangsilpprasert, 2013).

According to the importance and background above, to develop learning achievement of “Foreign Language Words in Thai Language” by using programmed instruction was interesting to conduct to lead the students to the utmost benefit of learning.

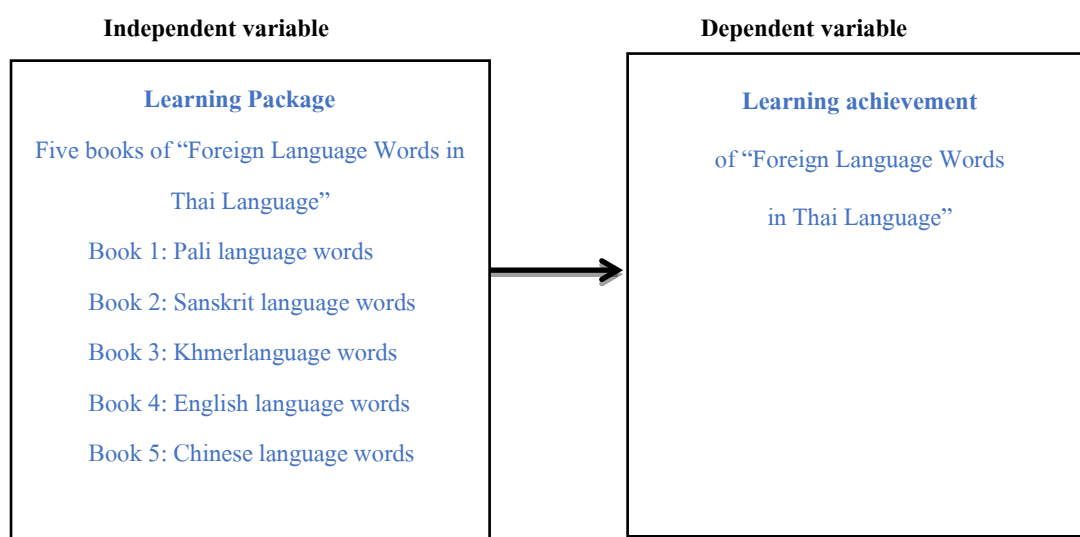
2. Research Objectives

(1) to develop learning achievement of “Foreign Language Words in Thai Language” by using programmed instruction for the ninth graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30 according to the efficiency criteria of 80/80.

(2) to compare between the pre-test and the post-test scores of the learning achievements of “Foreign Language Words in Thai Language” by using programmed instruction for the ninth graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30.

3. Research framework

The related literatures, such as the Basic Education Core Curriculum B.E. 2551, documents related to foreign words in Thai language, programmed instruction, lesson plans, learning assessment, were used to construct the conceptual and research framework as follows:

**Figure 1.** Research Framework

4. Research methodology

4.1 Research design

This research was pre-experimental in terms of one group pre-test and post-test design. There was one experiment group (A) with two observation times as pre-test (O_1) and post-test (O_2). While the experimental group was examined, the participants were observed at the time of pre-test and post-test (O_1 and O_2). The results were then compared the difference (Nuangchalem, 2013)

Table 1 Research design

Group	Pretest		Learning		Posttest
N	O_1	→	X	→	O_2

If N means group numbers used in the experiment
 O_1 means pretest
 X means programmed instruction of foreign language words in Thai language
 O_2 means posttest

4.2 Research instruments

4.2.1 Programmed instruction: five books of “Foreign Language Words in Thai Language” were prepared to the students in the quasi-experimental design. These books consisted of different five topics comprising (1) Pali language words, (2) Sanskrit language words, (3) Khmer language words, (4) English language words, and (5) Chinese language words

4.2.2 Lesson plans: five lesson plans of “Foreign Language Words in Thai Language” were also prepared and paired to each of the programmed instruction as mentioned.

4.2.3 Learning achievement Test: This test comprised 30 items in terms of four multiple choices. All the items were related to “Foreign Language Words in Thai Language” for the ninth graders. Moreover, the qualities of this learning achievement test have been examined in terms of content validity and reliability.

4.3 Data collection

The following steps were applied for data collection.

- (1) The students took the pretest which developed by the researcher themselves and then the test results were collected for data analysis.
- (2) The students studied five lesson plans by themselves. It approximately takes one hour for each topic (total for five hours). During learning, their behaviors were also recording.
- (3) After five hours of learning, the students took the posttest and then it was scored.
- (4) The pretest and posttest scores were then compared by using the inferential statistic.

4.4 Data analysis

The data analysis was divided into two parts as follows:

- (1) The efficiency of the programmed instruction was calculated by the use of criteria E_1/E_2 according to the method of Ruangsawan (2009).
- (2) Descriptive statistics, mean and standard deviation, were applied and inferential statistic, dependent sample t-test, was also applied for quantitative analysis.

5. Conclusion

5.1 The efficiency analysis (E_1/E_2) of the programmed instruction of the “Foreign Language Words in Thai Language” was based on the 80/80 criteria. It was found that the efficiency scores showed $E_1/E_2 = 81.67/82.22$, which meant that the efficiency of the programmed instruction of the “Foreign Language Words in Thai Language” was higher than the standard at 80/80 criteria. This result was shown at Table 2.

Table 2. The efficiency analysis (E1/ E2) of the programmed instruction of the “Foreign Language Words in Thai Language” for the ninth graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30

Student No.	Pretest Score (30)	Process Scores					Total (50)	Posttest Score (30)
		Set 1 (10)	Set 2 (10)	Set 3 (10)	Set 4 (10)	Set 5 (10)		
1	12	8	9	9	7	7	40	24
2	14	7	8	9	8	9	41	25
3	12	8	6	8	7	10	39	23
4	12	7	8	8	7	9	39	23
5	14	9	7	9	8	7	40	25
6	13	7	9	9	8	9	42	26
7	16	8	8	7	9	9	41	25
8	15	9	8	8	10	7	42	25
9	14	9	8	10	8	9	44	27
10	11	8	9	7	9	8	41	24
11	13	9	8	7	9	7	40	24
12	14	8	7	8	8	10	41	25
Total	160	97	95	99	98	101	490	296
\bar{X}	13.33	8.08	7.92	8.25	8.17	8.42	40.83	24.67
S.D.	1.44	.79	.90	.97	.94	1.16	1.40	1.15
%	44.44	80.83	79.17	82.50	81.67	84.17	81.67	82.22
E₁/E₂		81.67/82.22						

5.2 The comparison between the pre-test and the post-test scores of the learning achievements of “Foreign Language Words in Thai Language” by using programmed instruction for the ninth graders of Khonsarnwittayakom School under Secondary Educational Service Area Office 30 applied Dependent sample t-test with the statistically significant test of 0.05 level.

Table 3. The Result of the comparison between the pre-test and the post-test scores of the learning achievements of “Foreign Language Words in Thai Language” by using programmed instruction for the ninth graders of Khonsarnwittayakom School.

Testing	N	\bar{X}	S.D.	t	p - values
Pretest	12	13.33	1.44	- 31.895**	.00
Posttest	12	24.67	1.15		

** p < .05

According to Table 3, the mean of the pretest score was 13.33 ($\bar{X} = 13.33$, S.D. = 1.44) and the mean of the posttest score was 24.67 ($\bar{X} = 24.67$, S.D. = 1.15). This result showed that the learning achievement scores of posttests was statistically and significantly higher than the scores of pretests at 0.05 level.

6. Discussion

The research finding could be discussed as follows:

6.1 According to the efficiency analysis (E_1/E_2) of the programmed instruction of the “Foreign Language Words in Thai Language,” the scores showed $E_1/E_2 = 81.67/82.22$, which meant that the efficiency of the programmed instruction of the “Foreign Language Words in Thai Language” was higher than the standard at 80/80 criteria. This was the reason why the programmed instruction was systematically constructed. These five lessons comprised good characteristics of the programmed instruction, such as learning activities, indicators, learning content, and learning purposes, etc. In addition, the pretest and posttest were constructed based on the good principles of test construction and the qualities of the test, validity and reliability, were calculated and reported.

Besides, based on the programmed instruction, only important skills were selected and identified in the learning achievement test so that the students would be able to get what they have learnt from the prepared programmed instruction. However, apart from the validity and reliability, other indices, such as difficulty and discriminate values should be studied for the pre- and post-test for next research.

Finally, according to the research findings, the programmed instruction was definitely efficient to be used to study the knowledge and understanding of foreign language words in Thai language because of the efficiency index met the expected criteria of 80/80.

6.2 According to the comparison between the pre-test and the post-test scores of the learning achievements of “Foreign Language Words in Thai Language,” it was found that the learning achievement score of posttest was statistically and significantly higher than the score of pretest at 0.05 level. This was because of appropriate and significant learning materials. Besides, the learning assessment of the experiential groups was accurate and valid. Therefore, the research findings showed that formative and summative

assessment are very important to the students' learning process because they help the students learn fast and efficiently.

In conclusion, the hypotheses were tested and found that the programmed instruction of the five books of "Foreign Language Words in Thai Language" directly effected on the students' learning achievement. So, it is recommended that those five books should be utilized and applied to various styles of the students' learning so that they could be able to learn to the utmost potentials.

7. Recommendations

7.1 Recommendations for implementation

(1) The developed programmed instruction including its recommendations and instructions should be studied in details if it would be applied to develop the learning achievement of "Foreign Language Words in Thai Language."

(2) Related documents, instruments for learning, and other learning materials must be prepared and sufficient for the students.

(3) The pretest must be conducted every time before using the programmed instruction.

7.2 Recommendations for further study

(1) There should be the study of using Foreign Language Words in Thai Language" for other levels of education, such as higher education, primary education, etc.

(2) Other modern learning theories or models should be studied and researched in order to compare with the developed programmed instruction in both advantages and disadvantages.

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**ENHANCING ENGLISH READING SKILLS OF STUDENTS MAJORING
IN ENGLISH FOR BUSINESS COMMUNICATION,
SCHOOL OF LIBERAL ARTS, SRIPATUM UNIVERSITY
THROUGH THE WORLD PEACE ETHICS CONTEST**

Thavorn Thitthongkam, Ph.D.¹

**¹Lecturer, Department of English for Business Communication,
School of Liberal Arts, Sripatum University**

E-mail: thavorn.th@spu.ac.th

Boonlert Wongprom²

**²Assistant Professor, Department of English for Business Communication,
School of Liberal Arts, Sripatum University**

E-mail: boonlert.wo@spu.ac.th

ABSTRACT

The objectives of this research were: (1) to investigate the achievement in reading by attending the World Peace Ethics Contest, (2) to study the benefits of reading the book named “*Family Day by Day*”, and (3) to explore other prospects the winners of the World Peace Ethics Contest would receive apart from scholarships and certificates. The sample for this research consisted of 160 students, 20 winners, and 3 coordinators of the organizers. They were obtained by purposive sampling technique. The instruments used were: (1) pre-test and post-test, (2) evaluation form for the oral presentation of the group work, (3) a semi-structured interview form on the benefits of reading the book named “*Family Day by Day*”, (4) a semi-structured interview form on the prospects of the winners after having participated in the World Peace Ethics Contest. The statistics used for data analysis were: (1) percentage (%), (2) means (\bar{x}), (3) standard deviation (S.D.), and (4) t-test (dependent). The research results indicated that attending the World Peace Ethics Contest help to improve the English reading achievement of the students. The achievement in reading is statistically significant at the level of .05. The contestants won 20 prizes. They have benefited from reading the book named “*Family Day by Day*” on a number of issues., and the winners were likely to have other prospects other than the awards and certificates. However, the participants found difficulty in understanding Pali and Sanskrit terms that are scattered in the reading material or book.

KEYWORDS: Reading achievement, Dhammakaya Foundation, Enhancing English Skills, *Family Day by Day*, Using *Family Day by Day* to Enhance Reading English skills, World Peace Ethics Contest

1. INTRODUCTION

With rapid economic, social, and technological changes, particularly, socialization of the 21st century, educators in all disciplines need to take into consideration teaching approaches which promote and enhance holistic education and human development and which produce ethical and responsible citizens for the society. As human beings are considered indispensable assets and valuable capital for national development, individual people must be inculcated and endowed with sufficient morality, discipline, and ethics (Kumar, 2017).

Among the four English skills, reading is regarded as a significant learning tool, principally for acquiring needed information and self-study. Those who can read English well will be able to access the knowledge quickly and extensively. Many researchers (Rupley, Blair, & Nichols, 2009; Eshghinejad, 2016; Kornwipa, 2017) have found that most English language students have difficulty in reading when they encounter culture-specific contents or contents related to cultures different from their own. In teaching, the instructors often read the English passages to students, let the students read aloud, and then translate the passages, sentence by sentence, to the students. Occasionally, structures are highlighted. Instructors also explain the terminology rather than enhancing reading skills (Borg, 1999). Neither the students are encouraged to develop and sharpen their own reading, nor they given an opportunity to practice and experience their reading in a real life situation. Regarding the contents, most of the reading passages deal with on subject matters that are related to foreign cultures which the students are unfamiliar, and which they find dull, incomprehensible, and unrelated to their own immediate experience. This makes them feel bored, frustrated, and unmotivated. George and Paul (1995) suggested that enhancing reading skills should be integrated to build understanding to the reading purpose, requirement, and the reader's motivation. Reading skill is also important for personality development. According to Juyandegan (2016), he stated that reading skills helps to enhance self-esteem and self-enhancement as reading helps a person to be well-informed, and well-rounded as most adults are. In addition, reading skill also helps one human being to feel emotionally related to another human being in the world because through reading they learn about the plight and fortune of other human beings. Through their reading, they are able to express their understanding, compassion, and sympathy appropriately and learn how to live in harmony with other people in the society. Reading should be treated as a process and students should be systemically trained in a step-by-step process which includes presentation, practice, and production. The presentation step is done by instructors. The students have to practice the language in the first step. The production step is the situation in which students use language for communication in a real situation where students are encouraged to use more language. Instructors can help students develop their reading skills by using collaborative learning activities, using SQ4R teaching methods (Survey, Question, Read, Recite, Review,

Reflect), and assigning students to read more books. According to Aslan (2016), the enhancement of reading skills should focus on the application and relevance of the student's culture which enables students to connect with their learning and experiences in the future. Encouraging students to participate in competitive events is one of the most effective methods. This can help to cultivate awareness of ethics that can be conveyed from one culture to another and help to inspire the interest of the students which will help them to enhance their English reading skills successfully and sustainably.

The purposes of this study were to investigate the reading achievement of students who participated in the World Peace Ethics Contest, to determine the benefits of reading the book named "*Family Day by Day*", and to explore other prospects the winners of the World Peace Ethics Contest would receive apart from scholarships and certificates. With these objectives in mind, the paper is structured in four parts — an introduction which serves as a reference for analysis of the data, an overview of the World Peace Ethics Contest, research methodology and design, findings, discussion and conclusion.

2. Overview of World Peace Ethics Contest

The World Peace Ethics Contest (World-PEC) is an event designed and organized in English by the World Peace Ethics Club, together with Wat Phra Dhammakaya and Dhammakaya Foundation and its branch centers. The contest is intended for participation by students in every country where Wat Phra Dhammakaya and Dhammakaya Foundation and its branch centers are located. To date, there are 84 coordination centers in 31 countries around the world (Dhammakaya Foundation, 2018).

The contest is an annual competition that highlights positive changes in the behaviors of contestants or students. The event is held in about January for students around the world under the theme of "World Peace through Inner Peace, Love, Togetherness, and Happiness." The participants/contestants are required to read an English book and then take a written test at test centers designated by the World Peace Ethics Club.

There are two types of the contest — One is for school students, grades 4-12 and another for college and university students. By participating in the Contest, the participants are required to read English books which are designed to teach them how to develop pure mind, morality and ethics as well as to improve their reading skills. With this knowledge and reading skills, students are expected to grow up to be good citizens who will lead their country to the part of success and happiness. The knowledge gained from their reading can be applied to their daily lives and enables them to successfully utilize it in their self-development, both material and spiritual.

Recognizing the potential and significance of students annually, the World Peace Ethics Club, in cooperation with Wat Phra Dhammakaya and Dhammakaya Foundation and its branch centers, has organized the World Peace Ethics Contest since 2009. Participation in the contest, students are required to learn moral principles from such books as "*Family Day By Day*," "*Values Education for Peace*," and to write a "Diary of

Inner Peace”, and a 30-day diary of the good deeds they have performed as well as the good deeds they have witnessed. This ensures that the future of our nation will be in good hands of young people who are wise and virtuous. The objectives of the contest are to: (1) promote young people to learn basic moral principles that are universal and accessible to people of any race, religion and creed, so they have right livelihood, (2) instill creative potential in young people by encouraging positive personal qualities in daily lives, leading to a happy environment in both family and society, (3) teach young people to become well-rounded citizens in quality and morality, so they can lead their society to the path of success, happiness and peace.

Application for participation in the two types of the Contest is similar. Participants are required to submit an application form before the announced deadlines. The application form can be downloaded at www.vir2kidz.com. Completed application forms can be forwarded either www.facebook/WorldPeaceEthicsClub, or to vir2kidz@gmail.com. After that, World Peace Ethics Club will send packages containing relevant information materials to participating schools. For grades 4 to 12 students, the package include a book entitled *Values Education for Peace* (one copy to be shared by three students) and a Diary of Inner Peace (one copy for each participating student). After receiving the books, school students, grades 4-12 study by reading the book and write “Diary of Inner Peace.” Reading the book is worth 80%, and writing Diary of Inner Peace for 30 days is worth 20 %. The coordinating teacher collects the Diary of Inner Peace from all students and the score is to be recorded in the summary scores of “Diary of Inner Peace” Form and submits the diary of the students whose score is 100% (1,500 points) to the World Peace Ethics Club before the announced deadline.

For college and university students, each applicant will receive a book named “*Family Day By Day*.” They have to read the book and participate in the World Peace International Youth Ambassadors’ Camp which is organized at each center and take a written test. The written test is organized by the World Peace Ethics Contest Invigilators on the announced dates at test centers organized globally. In addition to a written test, the students are required to complete a multiple choice test, which the test consists of 100 items and takes 1 hour and 40 minutes to complete.

The test results will be sent to participating schools and institutions and posted on www.vir2kidz.com or www.facebook/WorldPeaceEthicsClub. The Awards Ceremony is organized after that on Vesak Day. Finally, announcement of contest results and the Award Ceremony are the last procedure. Scholarships and certificates are awarded to winners and participating students. Certificates of Appreciation for Support given of World Peace Ethics Contest are awarded to the school principal and coordinating teachers.

For this study, the researchers focused on college and university contestants who read a book named “*Family Day by Day*”, attended the World Peace International Youth Ambassadors’ Camp, and took a written test. The researchers would like to examine whether attending the World Peace Ethics Contest helps contestants improve their English reading skills, what benefits the students gained from reading the book named *Family Day by Day*, and whether the winners of the World Peace Ethics Contest will have any other opportunities/

prospects besides scholarships and certificates. Researchers had experimented with students who had similar interests with the sample without gender identification and Cumulated Grade Point Average (CGPA) and other aspects.

3. RESEARCH OBJECTIVES

The objectives of this research were to: (1) investigate the achievement in reading by attending the World Peace Ethics Contest, (2) study the benefits of reading the book named “*Family Day by Day*,” and (3) explore other prospects the winners of the World Peace Ethics Contest would receive apart from scholarships and certificates.

4. RESEARCH QUESTIONS

There are 3 research questions. They are: (1) Is attending the World Peace Ethics Contest help contestants improve their English reading skills? (2) What are the benefits of reading the book named “*Family Day by Day*”, and (3) What other opportunities will the winners of the World Peace Ethics Contest have besides scholarships and certificates?

4. RESEARCH METHODOLOGY

4.1 The sample for this research consisted of 160 students majoring in English for Business Communication, School of Liberal Arts, Sripatum University for answering the first research question, 20 winners for answering the second research question, and 3 coordinators of the organizers. They were obtained by purposive sampling.

4.2 The instruments used were as follows:

4.2.1 Pre-test and Post-test: 100 item-multiple-choice, one written question. Both tests have a 0.86 confidence level indicating that the reliability of the test was high.

4.2.2 An evaluation form for the oral presentation of the group work; the reliability of the evaluation form is 0.91 which indicates that the reliability of the evaluation form is high.

4.2.3 A semi-structured interview form designed to elicit the students’ response on the benefits of reading the book named “*Family Day by Day*. The interview form has been validated by the experts.

4.2.4 A semi-structured interview form designed to elicit the response on the winners’ opportunity of the World Peace Ethics Contest. The form has been validated by the experts.

4.3 Data collection for the research was as follows.

4.3.1 The pre-test was administered to 160 contestants.

4.3.2 The contestants read the book named “*Family Day By Day*”, attended the World Peace International Youth Ambassadors’ Camp, and took the World Peace Ethics Contest.

4.3.3 The post-test, which was the same test as the pre-test, was administered to the 160 contestants after their having attended the World Peace Ethics Contest.

4.3.4 An evaluation form was used to assess the oral presentation of the group to collect the data at the World Peace International Youth Ambassadors' Camp.

4.3.5 A semi-structured interview form was used to collect the data on the benefits of the book named "*Family Day by Day*."

4.3.6 A semi-structured interview form was used to collect the data on the winners' prospects/opportunity after having participated in the World Peace Ethics Contest.

4.3.7 Data obtained from the Pre-test and Post-test, from an evaluation of the oral presentation of the group work, and from the semi-structured interview forms were analyzed using a computer program, and the results were presented.

4.4 The statistics used for data analysis were (1) percentage (%), (2) means (\bar{x}), (3) standard deviation (S.D.), and (4) t-test (dependent).

5. RESULTS

5.1 The results of the pre-test and post-test tests

The results of the pre-test and post-test tests of the sample of 160 samples showed the achievement of English reading skills. The achievement of English reading skills after having attended the World Peace Ethics Contest was significantly correlated at 51.50% . This can be concluded that participating in the World Peace Ethics Contest help students improve their English reading skills. The achievement in reading is statistically significant at the level of .05.

The findings also revealed that the mean reading skill achievement score of the students before participating in the World Peace Ethics Contest was 45.50 (out of the total score of 100). After having attended the World Peace Ethics Contest, the mean reading skill achievement score was 51.50. When the difference between the pre-test and the post-test scores was compared using the T-test, the -2.784 result, which is less than .001, was derived. This can be concluded that attending the World Peace Ethics Contest helps contestants better improve their English reading skills.

Table 1 A comparison of reading achievement before and after attending the World Peace Ethics Contest

Description	N	Pre-		Post-		t-test	df	P-value
		\bar{x}	S.D.	\bar{x}	S.D.			
Reading achievement	160	45.50	0.83	51.50	0.61	-2.784	160	<.001

5.2 The results from the semi-structured interview form on benefits of reading the book named “*Family Day by Day*” collected from the winners.

The winners stated that they gained more knowledge from reading the book because the book named “*Family Day By Day*” is a food for thought which is a guideline for leading and conducting a successful family life. They learned how to create love which is the force that cements ties between family members. They learned about togetherness which is the source of warmth. They learned how to think critically, and how to develop their habits. Reading this book enables them to talk about Dhamma well because the book has not only provided them with the information about the mindset but it has also given the appropriate vocabulary to talk about the subject matter. Interestingly, reading the book has been shown to help the winners better understand how to interact with other people, sharpen their thinking ability, broaden their world view, and develop their own unique identity and individuality. Importantly, the winners also learned how to give up bad habits, how to perform good deeds, and how to meditate to purify the mind. They realized that the more good deeds they perform; the more energy they can store inside themselves. The more energy they have garnered, the more it will attract goodness, purity, stability, and comfort into their lives. However, the downside of the book is that it has a lot of technical terms, written in Pali and Sanskrit, and many of these terms refer to the mind and spirit which takes time to understand.

In conclusion, it can be said that reading the book “*Family Day By Day*” have given numerous benefits. The book itself not only stimulates their thinking and broaden their world view, but it also allows them to perceive and generate a path to achieve an inner peace with themselves, to inculcate in themselves a loving and caring attitude toward other people, and to live in harmony with other human beings in the society.

5.3 The results from the semi-structured interview form on the winners’ opportunity of the World Peace Ethics Contest.

The data collected from the organizers revealed that there are some other opportunities for the winners and contestants of the World Peace Ethics Contest besides scholarships and certificates. Delightfully, the organizers have shown that the winners and the contestants with proper behavior, such as observing the Five Precepts (Sila), having a moral and volunteering spirit or public-spiritedness, and sacrificing themselves to work for non-profit organizations, also have the opportunity to participate in Co-operative Education Program with the World Peace Ethics Club, Wat Phra Dhammakaya and Dhammakaya Foundation and its branch centers both in Thailand and with 84 coordination centers in 31 countries around the world. Depending on the intention of the contestants, their uncompromising life goal, and request from concerned parties. Qualified winners and contestants will have an opportunity to live and work with other people and sharpen their language skills at those centers.

6. DISCUSSION

The findings of this study revealed that attending the World Peace Ethics Contest helps contestants better improve their English reading skills. In other words, the achievement of English reading skills after having attended the World Peace Ethics Contest was statistically significant at the level of .05. This is due to the fact that during the period of participating in the World Peace Ethics Contest, the contestants are required to read a book, learn new vocabulary words by themselves, take a written test on the book, and talk about the ideas in the books. In order to discuss the ideas in the books, they have to actively engage in their reading, trying to garner the main points presented in the books. With this reading opportunity in a real life experience, the students are able to practice and improve their reading skills. This finding is consistent with the concept of Borg (1999) that learning new words by oneself enhances English reading skills. Correspondingly, reading the book named "*Family Day By Day*" in groups at the camp made contestants feel that the contents were comprehensible and interesting. The contestants are enthusiastic and motivated because they have a reading goal in mind when they read. This is consistent with the idea of George and Paul (1995) who suggested that enhancing reading skills should be integrated to build an understanding of the reading purpose, requirement, and the reader's method. It also supports the idea of Aslan (2016) when he contends that encouraging students to participate in competitive events is one of the most effective approaches to reading skill development. Attending the World Peace Ethics Contest, the contestants had an opportunity to read, with other contestants, the book named "*Family Day By Day*", and put the reading process (presentation, practice, and production) into practice. In doing this, they have developed their reading skills through collaborative learning activities.

From the semi-structured interview of the 20 winners on the benefits of reading the book named "*Family Day by Day*", the participants stated that they have gained several benefits from such an activity. For examples, they have gained the guidelines on how to lead a successful family life, how to achieve happiness through togetherness and critical thinking, and other countless benefits. Reading the book helped them to have a guideline for having successful family life. They learned how to create love within their families, learned about togetherness, learned how to have happiness, learned new ideas for expressing themselves in words, learned how to think critically, learned how to develop their habits, and other countless benefits. The findings were in agreement with the idea of Juyandegan (2016) who contends that reading not only helps readers to enhance their self-esteem and self-development but also leads them to become adult. This is because the winners have learned the moral principles from the book, making them become well-prepared and well-informed on how to live their daily lives ethically and morally. With their personal lives in good shape, they certainly can work toward bringing peace, happiness, and success to their society, which, in turn, will contribute to the building of a strong, caring and loving nation. That the book is scattered with Pali and Sanskrit terminology especially those that are related to the mind and spiritual concepts, is normal for such a book on moral ethics. Novice readers, especially young adults, who are unfamiliar with the terms, would find them difficult to understand.

With perseverance and time, together with useful reading techniques, they will soon find that the book is not beyond their reach, and the problem can be overcome.

Regarding the winners' opportunity of the World Peace Ethics Contest, the findings revealed that qualified winners and contestants of the World Peace Ethics Contest do have other prospects besides scholarships and certificates. These prospects include an opportunity for participation in a Co-operative Education at one of the Wat Phra Dhammakaya centers such as the World Peace Ethics Club, the AEC Foreign Bureau of Wat Phra Dhammakaya, Dhammakaya Open University California (DOUC), Azusa, USA., Wat Phra Dhammakaya and Dhammakaya Foundation and its branch centers both in Thailand and at 84 coordination centers in 31 countries around the world. A Co-operative Education will provide an opportunity for the participants to sharpen their English language skills, to develop their interpersonal communication skills through their interaction with people who are working at the centers. However, to be successful in applying for participating in a Co-operative Education at one of the Wat Phra Dhammakaya and Dhammakaya Foundation and its branch center, applicants must show their strong commitment to working at the workplace; once selected and assigned to the job, they will have to work like regular employees.

7. RECOMMENDATION

7.1 Implication for Practice

7.1.1 The research found that there are several benefits of reading the book named "*Family Day by Day*", and the winners of the contest have numerous opportunities by attending the World Peace Ethics Contest. Therefore, teachers or instructors should encourage students to participate in this annual contest.

7.1.2 Students should be interested in attending the event.

7.2 Suggestions for the further research.

7.2.1 A study on the Participants' satisfaction with the World Peace Ethics Contest should be undertaken so as to bring the results of the research into the adjustment of this annual contest.

7.2.2 A study on the use of language, writing styles and strategies of the book *Family Day By Day* should be undertaken in order to gain knowledge and understanding of language, writing styles and strategies.

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**An Exploration of Interlanguage and Code-Switching;
A Better Understanding and Pedagogical Implications
For English Teaching and Learning**

Wilasinee Darachai, Ph.D.

School of Liberal Arts, Sripatum University

E-mail: wilasinee.da@spu.ac.th

Piboon Sukvijit Barr, Ph.D.

School of Liberal Arts, Sripatum University

E-mail: piboon.su@spu.ac.th

ABSTRACT

The notion of learners' errors leads us to believe that errors are caused by interference from the learners' mother tongue. However, after having delved into interlanguage and code-switching studies and read a fair amount of research studies, the researcher has come to understand better as to why and how to study these topics. This paper aims to provide a brief background of interlanguage and code-switching, especially influential previous research studies on morphology and to explore research methodologies in interlanguage, morphology, and code-switching, so that the reader can understand better in what way and how researchers and educators conduct such research. Learning through studies conducted by other researchers, we gain more knowledge about the existing problems that EFL scholars are facing and how to apply the knowledge to classroom teaching. In this paper, it is suggested that teachers should respect student errors because they are a part of the learning process. Teachers need to develop strategies for overcoming avoidance and should keep in mind that the students' errors are a precious resource which inform about the state of their students' ability.

KEYWORDS: code-switching, error, interlanguage, morphology

1. Introduction

Acquiring a second language is certainly an arduous task and it takes time to become a fluent and effective user of that language. During acquisition, learners do make errors which are part of language learning. This paper attempts to help English teachers to understand two important aspects of the bilingual development process; the notion of interlanguage, especially in morphology aspect and the notion of code-switching. The Natural Order Hypothesis indicates that learners make errors and that these errors are a

necessary part of language learning and is a natural order in which learners pick up a language. These errors are not random, but are very similar to the errors that children make when learning their first language. If we follow the mistakes that our students make through time, we will see that they encounter similar difficulties.

2. Objectives

(1) To provide a brief background of interlanguage and code-switching, especially influential previous research studies on morphology.

(2) To explore research methodologies in interlanguage, morphology, and code-switching, in order to gain an understanding into what and how researchers and educators conduct such research can be.

3. Background of Interlanguage Morphology

As we all know, Selinker is the most influential key figure in interlanguage, and he is the one who coined the term ‘interlanguage’ to refer to the systematic knowledge of an L2 which is independent of both these learner’s L1 and the target language (Ellis, 1994). Since the term was created, many linguists and scholars paid more attention to it in various levels. Based on literature reviewed by Young (1989), interlanguage morphology in the past received less attention than interlanguage phonology and syntax and very few researchers were interested in lexical errors despite the fact that they outnumbered grammatical errors (Blaas, 1982, Johansson, 1978, cited in Meara, 1984). Meara (1984) further explains that morphology interlanguage is different from syntax and phonology. The last two concerns with ordering relationships among a small set of primitives, and the rules are designed to explain these relationships economically and concisely, unlike those of the lexicon.

Of all prominent research studies conducted in interlanguage shown in Young’s (1989), six out of 20 studies were only conducted in morphology (i.e., Ellis, 1987, 1988, Larsen-Freeman, 1975, Tarone, 1985, Tarone & Parrish, 1988, and Young, 1986). However, in the early days, the most substantial body of work on lexis within the interlanguage framework is that of Levenston in the late 1970s (Meara, 1980, cited in Davies, Criper and Howatt, 1984). He was concerned with the idea of lexical simplification, which he explained that it was how learners cope with situations where they wanted to avoid certain types of words when they were operating it in their L2. Later on, Young’s study (1989) on variation in interlanguage morphology, which was involved in the (s) plural-marking in the speech of Chinese learners of English, became a prominent framework, which has been mentioned and cited by other researchers up until the present days.

As far as we have reviewed the early works on interlanguage morphology, most of the studies conducted in the past approached the studies in terms of free and bound morphemes in interlanguage which provided researchers with interesting data from a number of analytical perspectives. In the next section, an exploration of the previous research studies interlanguage morphology will be highlighted, along with the analytical summary of the peer-reviewed research articles in the methodologies of interlanguage morphology.

4. Variation of Methodologies Employed in the Studies of Interlanguage Morphology

Before we delve into the methodologies and how researchers approach data in interlanguage morphology, we would like to explain briefly from our search on methodologies employed in the area of interlanguage as a whole picture. Also, some argumentations on those approaches will be revealed.

In interlanguage study, different methodologies have been used. In the early days, individual's intuition and introspections concerning learners' native language and target language on the basis of similarities or differences between the two systems were used to predict learners' difficulties. The two ideas of introspection and intuition are referred to Seliger (1983, cited in Young, 1989).

In general, various approaches to interlanguage studies have been employed by researchers as follows:

- Quantitative and Qualitative approaches to second language research
- Direct and indirect approaches to data collection
- Longitudinal and Cross-sectional approaches to data collection

However, each approach has its own strengths and weaknesses, and some researchers (cited in Young, 1989) suggested that a quantitative approach to data analysis is superior to a qualitative approach in the study of variation, but the contexts of speech identified by qualitative researchers must be fully taken into consideration in a quantitative approach.

It has been argued that a direct technique of data collection such as uncontrolled interviews is superior to an indirect means. However, the limitations of the interview format should be acknowledged, and, in particular conclusions based on interview data should not necessarily be expected to apply to conversation. It has also been argued that a cross-sectional design for data collection and analysis will give an adequate picture of second language development only if contextual factors are carefully controlled.

Finally, it has been argued that a research design for the study of variation which measures the effects of many independent variables is superior to a simple bi-variable design. As far as we know, based on class discussions and reviews of research studies, within these approaches, Interlanguage studies are usually and primarily conducted based on the evidence of error analysis and/ or contrastive analysis, which are idiosyncratically based on the learners' experiences with the L2. As for the study of interlanguage morphology, the classical research tool for morphology interlanguage is error analysis. What many researchers did in the past was setting up taxonomies of the errors. The most taxonomy of lexical errors was from Ringborn (1978, cited in Meara, 1984). Later, Kellerman's work became a more interesting approach by using experiments to investigate learners' use of a set of idiomatic expression. Still later, the most substantial body of work on interlanguage morphology based on the framework provided by Levanston (1979, cited in Meara, 1984) was presented. His principle concerned the idea of lexical simplification, that is how learners cope with situation where they want to avoid certain types of words when they are operating it in their L2. Most of his work is based on a discourse

completion tasks, the technique that brings errors into view. Also, his works also focus on the differences between the output of a learner and the output of a native speaker.

5. Background of Code-switching

In this paper, we intend to explain the notion of code-switching as inter-linguistic phenomena to bilinguals. As linguistic bilingual behavior, code-switching is a concept mentioned in many research studies. It is used and related to other notions such as language transferring or language borrowing. Also, both interlanguage and code-switching are related to language developing bilingual learners. According to Duran (1994), in order to become bilingual, a person has to pass through three stages: interlanguage, code-switching, and acquisition. Interlanguage is in the earlier stage of developing while code-switching is in the middle and the last phase is the acquisition.

We have reviewed the early works on code-switching and found the varieties of code-switching definitions. The term code-switching is used in several ways and different meanings. There is also some overlapping and confusion on this term. In previous research, code-switching was defined differently. Myers-Scotton (1993b) explained that “code-switching appears when learners switch language varieties in the same conversation”. Milroy and Muysken (1995: 7) defined code-switching as “the alternative use by bilinguals of two or more languages in the same conversation”. The definitions offered by Myers-Scotton, Milroy and Muysken did not emphasize the notion of code-switching which occurs on intra-sentential or switches within the sentence and inter-sentential or switches between sentences. Conversely, some researchers such as Kachru (1983), Singh (1985), Sridhar and Sridner (1980) used the term code-switching to refer to only inter-sentential switches. The intra-sentential switches were called as code-mixing. Gumperz (1982) stated that code-switching refers to “the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems” (p. 59), so it was verified that code-switching can occur on varieties of the same language. (cited in Turnbull, 2007). Beebe (1977, 1981) and Gardner-Chloros (2000) suggested that code-switching is not found only between languages, but between dialects of the same language, too.

From the reviewing of code-switching definitions above, we would suggest to conclude that the term code-switching can be used as “ the use of two or more linguistic varieties in the same conversation or interaction” (Scotton & Ury, 1977, p. 5) or “the use of two languages simultaneously or interchangeably” (Valdes-Fallis, 1977). In the next section, an exploration of the methodologies of code-switching studies and its pedagogical implications will be focused.

6. Previous Code-Switching Studies and its Findings

When code-switching is used, it can be implied that the bilingual learner's competence is not stable. Earlier studies mentioned two main reasons for using code-switching (Gysels, 1992 cited in Duran, 1994): it is used

1. to fill a linguistic or conceptual gap and
2. for other multiple communicative purposes

Gumperz (1982) showed six basic discourse functions (or purposes) of code-switching. They are (1) quotations, (2) addressee specification, (3) interjections, (4) reiteration, (5) message qualification, and (6) personalization versus objectivization. Differently, Saville-troike (1982) suggested eight functions: (1) softening or strengthening of a request or command, (2) intensification or elimination of ambiguity, (3) humorous effect, direct quotation and repetition, (4) ideological statement, (5) lexical need, (6) exclusion of other people within hearing, (7) avoidance strategy, and (8) repair strategy. Code-switching also plays a role as a device to present an identity and negotiate relations of power and dominance (Bolonyai 2005).

From the code-switching functions discussed above, we would associate code-switching with the degree of the two-language learners' competence. Naturally, speakers, who are fluent in both languages, may use some functions to run the flow of talk. In contrast, bilingual learners tried not to make errors in their communications, thus, code-switching is one of the ways to avoid some errors in their speech productions. Chana (1984) revealed listeners' evaluative responses to code-switching by a competent Panjabi and English speaker. When he used code-switching he was considered less fluent than when he used only Punjabi or only English. Confusion does not seem to be the case in stable bilingual contexts.

7. Conclusion and Suggestion

Understanding what problems students encounter in acquiring a second language is beneficial to language teachers and learning about students' interlanguage and code-switching sheds light on the students' process of English language learning and development my students' development in learning English. Also, studying research findings on interlanguage and code-switching enables teachers to gain more knowledge about the existing problems that EFL is facing and then apply knowledge to the teaching in a classroom. Moreover, by familiarize themselves with literature, research methodology, and research findings and discussion, teachers can become more informed about latest developments in the field and that they themselves can conduct their own research study systematically and more effectively.

To be a good language teacher, the teacher needs to have a solid grounding in linguistics in order to diagnose the learners' problems and analyze the data. Interlanguage morphology and code-switching are the areas that researchers and teachers are becoming interested in conducting recently. By analyzing learners' errors, the teachers can find out what process influences learners' interlanguage. Focusing on code-switching,

the teacher can understand why and when the learners switch the language. The knowledge on the subject cannot help them predict what learners might encounter or go through before they fully acquire L2.

From the discussion on interlanguage and code-switching above, some recommendations and classroom implications are given below.

1. Teachers should respect student errors - they are a part of the learning process. Respecting does not mean taking no notice of them, but it does mean that they are not to be treated as necessarily being evidence of stupidity, idleness or evil intent on the part of the learner.

2. Only treat those errors that students are capable of correcting, according to the state of their interlanguage at the time of the error. Written scripts should not be returned with simply everything underlined in red ink.

3. Teachers need to develop strategies for overcoming avoidance. The student needs to be put in a situation where he or she is forced to use the unassimilated structure and to think about the problems that this poses. However, this needs to be treated as a process of discovery rather than as a minefield.

Most importantly, teachers should keep in mind that the students' errors are a precious resource for them, which allow them to understand the state of their students' interlanguage. This is why it is so important to avoid negative marking, where the students simply learn that if they lose points if they make errors.

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**A STUDY OF LEARNING ACHIEVEMENT ON ENGLISH GRAMMAR IN
ADDITIONAL ENGLISH SUBJECT OF PRATHOMSUKSA 6TH STUDENTS
OF SARASAS WITAED BANGBON SCHOOL USING LEARNING
MANAGEMENT WITH GAMES AND SONGS**

Wipada Photcharakawin

Curriculum and Instruction/Faculty of Education/North Bangkok University

E-mail: Wipada.pho@northbkk.ac.th.

Benjarat Ratchawang, PhD.

Curriculum and Instruction/Faculty of Education/North Bangkok University

E-mail: Benjarat.ra@northbkk.ac.th.

ABSTRACT

The purpose of this research was to compare the difference of learning management with games and songs, had on one group of subjects before and after the experiment. The sample of this research consisted of 34 sixth grade students of Sarasas Witaed Bangbon School in the first semester of 2018. The sample was selected by simple random sampling. The research instruments were used (1) English lesson plan based on the learning management with games and songs. (2) English Grammar achievement tests (3) English Speaking Ability Assessment. The statistics used in the analysis were Percentage, Mean (\bar{X}), Standard Deviation (SD.) and Dependent sample t-test.

The finding of this study was found that there was a statistically significant difference between the mean scores student obtained from the pre-test and post-test of English grammar achievement test at a significance level of 0.05

KEYWORDS: English grammar, games, songs

1. Introduction

From the background and importance of teaching grammar, Teachers must give priority to arranging active learning management, including finding out the way that helps learners to understand grammar. Knowledge of grammar affects reading, writing, listening, speaking skills effectively. Conversely, Language with errors will slow down the communication and conversation. Moreover, it finds harder to express the speaker's ideas and thoughts clearly and concisely. Mostly speaker used to get doubts when they are speaking

like, which preposition to use? Which tense is better? Unsure about the right grammar can often slow down or make the speaker hesitant (Subasini & Kokilavani, 2013). However, grammar is a study of the rules of language which is difficult for English learners as a foreign language.

Games have been applied broadly in instructing English, especially in teaching grammar. When conducting grammar lessons, teachers utilize games or game-like activities to develop student's motivation and make the learners relaxed and eager to take part in the lessons (Ayesha, Muhammad, & Sidra, 2016). Language games can supply a reasonably realistic environment for communication and they can give plenty of practice in speaking. If we divide our class into small groups, the game can also give the shy pupil the chance to participate gradually more and more alongside his more extroverted and self-confident fellow-pupils. (Matson, 1979) Music offers special benefits for those learning a new language. Listening to songs and singing are a natural and enjoyable way to practice new sounds, words, phrases and grammar. (Kristin, 2018)

Researchers recognized the benefits of games and songs, a study was conducted to enhance students' English grammar learning through learning management with games and songs of the sixth grade students of Sarasas Witaed Bangbon School. The present study, thus, aims to share experiences and findings from the study which investigated the effects of learning management with games and songs on students' English grammar learning.

2. Research Objectives

To compare the difference of learning management with games and songs had on one group of subjects before and after the experiment.

3. Research Framework

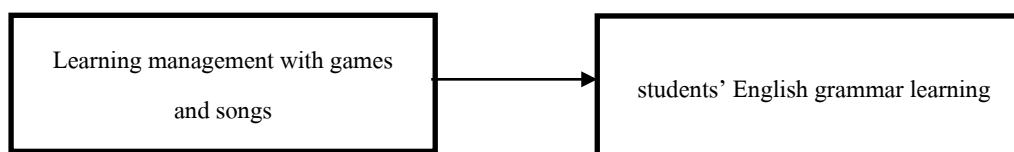


Figure 1 Research Framework

4. Research Methodology

4.1 Research Design

This research is a quasi-experimental research of the one group pre-test post-test, as shown in table 1 below:

Table 1: One group pre-test post-test Design

Pre-test	Treatment	Post-test
T ₁	X	T ₂

T₁ represents Pre-test
 T₂ represents Post-test
 X represents English Grammar Learning Management with games and songs

4.2 Population and Sample

The population of this research was sixth grade students of Sarasas Witead Bangbon School. There were 4 classrooms with 136 students. The sample consisted of 34 sixth grade students in grade 6/2 in the first semester of the 2018 academic year. The sample was selected by simple random sampling.

4.3 Variables

Independent Variable: Learning Management with game and song

Dependent Variable: Students English grammar learning

4.4 Research Instrument

(1) English lesson plan based on the learning management with games and songs. It has been constructed from the core concept of the Basic Education Curriculum 2008 and Family and Friends 6 Book. There are 10 lesson plans. The implement of the lesson plans was carried out in the first ten weeks of the semester. Each lesson plan lasted two hours. Students were required to learn grammar for each lesson plan. Shown in the table below is a summary of a plan for ten weeks.

Table 2: summary of a lesson plan based on games and songs.

week	topic	Game	Song / artist
1	First Conditional	Tic Tac Toe	Count on me /Bruno Mars
2	Second Conditional	Stranded in a cave	If I were a boy /Beyonce
3	Present Perfect	Stop the bus	See you again /Wiz Khalifa ft. Charlie Puth
4	Present Perfect Continuous	Hangman	Waiting for a girl like you /Foreigner
5	Past Simple	Board Race	Lost boy /Ruth B
6	The Passive (Present Simple)	A-Z	Rock in' English / tom Simerk
7	The Passive (Present Continuous)	Hot Seat	You are being loved / Steven Curtis Chapman
8	The Passive (Present Perfect)	Football	The bread has been broken / Jeff Deyo
9	The Passive (Past Simple)	Up & Down	I was made for loving you / Tori Kelly ft. Ed Sheeran
10	The Passive (Future Simple)	Chain Story	She will be loved / Maroon 5

As shown in the table, games and songs were integrated into English grammar learning management which was divided into three teaching steps:

The first step (Presentation): the teacher led the lesson by asking questions and informed the learning objectives, as well as revised the previous knowledge to lead to new content. The songs were played and presented by the researchers at first and then sung together with the students twice. All the students participated in singing the songs. The sentences in the song were brought to teach grammar usage and structures.

A second step (Practice): students were provided with opportunities to practice applying the learned English grammar. Games were used to support students' learning in this step. For example, the A-Z game, the teacher informed the rules of the game and divided the players. The teacher wrote the letter A to Z on the board. Students told the nouns beginning with the letter A-Z. After students were required to make a passive voice sentence by choosing noun from the board. They also had to use different verbs. This can be interesting and challenging for students.

The third step (Production): this step was designed with the aim of developing student's communication skill based on English grammar through speed contest game. The student who raised the hands was the first person. Students could make a sentence from the provided pictures which helped them to practice English grammar.

(2) English Grammar Achievement Test: The author constructed an English achievement test that comprised of 30 items each with four answer choices after presented it to 3 experts to examine. The result of Index of Item-Objective Congruence (IOC) was 0.60-1.00. Then, try out with seventh grade students of Sarasas Wittead Bangbon School. The researcher examined and calculated the difficulty index which was between 0.33 – 0.80. And the discrimination was between 0.33-0.47. The reliability of the whole test using the Lovett formula was .90.

(3) English Speaking Ability Assessment: English speaking test was designed criteria using a scoring rubric to measure speaking ability which adapted concept from Harris (Harris & Edward, 1990). The rubric is shown in the following table.

Table 3: English Speaking Ability Assessment Rubric Score

Rating Scores	Description
1	Make a few noticeable errors in grammar and word order.
2	Occasionally makes grammatical and word orders errors that do not however obscure meaning
3	Grammar and word order errors make comprehension difficult, must often rephrase sentences.
4	Errors in grammar and word order, so, severe as to make speech virtually unintelligible.

4.5 Data Collection

Sample students did the pre-test which was English grammar achievement test and English speaking ability assessment. English grammar achievement test was taken one hour. The researcher asked ten questions for each student to assess English speaking skill which took one hour and a half. English grammar lesson plan based on learning management with games and songs were conducted with the sample students. There are ten lesson plans that operated two hours per week. After the lesson plans were completed, a researcher brought the English grammar achievement test and English speaking ability assessment that is the same one of pre-test to test sample students again.

4.6 Data Analysis

In order to determine the effectiveness of learning management with games and songs on students' English grammar knowledge, data were analyzed with descriptive statistics such as percent, average and standard deviation (SD.) Furthermore, t-test for dependent samples was used to test either a change or a difference in means between pre-test and post-test.

5. Research Findings

(1) The score of both pre-test and post-test were made known to the students. The results of scores are shown in Table 4.

Table 4: Results of Pre-test and post-test scores

Student	Pre-test score (40)	Percent	Post-test score (40)	Percent	Level
1	33	82.5	40	100	Excellent
2	29	72.5	38	95	Excellent
3	30	75	38	95	Excellent
4	29	72.5	38	95	Excellent
5	28	70	37	92.5	Excellent
6	27	67.5	36	90	Excellent
7	27	67.5	36	90	Excellent
8	30	75	36	90	Excellent
9	27	67.5	36	90	Excellent
10	29	72.5	35	87.5	Excellent
11	27	67.5	35	87.5	Excellent
12	29	72.5	34	85	Excellent

Table 4:(Continued)

Student	Pre-test score (40)	Percent	Post-test (40)	Percent	Level
13	28	70	34	85	Excellent
14	27	67.5	34	85	Excellent
15	27	67.5	33	82.5	Excellent
16	25	62.5	33	82.5	Excellent
17	25	62.5	33	82.5	Excellent
18	24	60	33	82.5	Excellent
19	25	62.5	32	80	Excellent
20	25	62.5	32	80	Excellent
21	24	60	31	77.5	Good
22	23	57.5	30	75	Good
23	25	62.5	30	75	Good
24	23	57.5	30	75	Good
25	23	57.5	30	75	Good
26	20	50	29	72.5	Good
27	20	50	29	72.5	Good
28	19	47.5	28	70	Good
29	19	47.5	28	70	Good
30	22	55	27	67.5	Fair
31	18	45	27	67.5	Fair
32	19	47.5	27	67.5	Fair
33	18	45	26	65	Fair
34	16	40	25	62.5	Fair
Overall Average	842	61.91	1100	80.88	Excellent

From Table 4, learning management with games and songs on English grammar are shown. Post-test scores were higher than pre-test scores for every student. Post-test scores were averaged as 80.88 percent which was at the excellent level.

Table 5: Comparison pre-test and post-test scores

Testing	n	Full score	\bar{X}	SD.	df.	t	p-value
Pre-test	34	40	24.76	4.11	33	33.308	.000*
Post-test	34	40	32.35	3.96			

From Table 5, learning management with games and songs on English grammar was statically significant higher than that before using learning management with games and songs at the .05 level of statistical significance.

6. Discussion

Based on our study, it has shown students' statistically significant improvement after the exposure to the treatment, it could be pointed out that learning management with games and songs can effectively enhance student's English grammar learning. There are three mains reasons for the improvement students' learning. As can be seen from the following.

First, learning management with games could be enhanced students' English grammar learning. Due to the competitive game, the learners tried to understand English grammar by creating interactions with friends. Most students were eager to add points, with their own team. This claim is clearly supported by Supawan (2015), Learning English grammar through games related to higher English grammar achievement due to the competition between the groups encouraged mutual assistance. Team members will be helped to explain the grammatical structure for teammates. It was a good way to review the knowledge of students and to check the accuracy of the content. As Jacobs & Kline Liu (1996) claimed that naturally when playing games, students are trying to win or to beat other teams for themselves or on the behalf of their team. In the class, learners will definitely participate in the activities. Therefore, in groups or in pairs, they are more willing to ask questions, communicate and discuss with their partners and think creatively about how to use English to achieve the goal. Additional support is granted by Lien & Thi Minh (2017), games will be used in order to help all students practice English more naturally and accurately and help them know the way to use exactly grammar rules. Based on this, it could be claimed that learning management with games could be developed students' English grammar learning.

Second, in the first step of instruction, learners are motivated with songs to practice using grammatical sentences. Students could understand and memorize the grammar structures from lyrics. This justification is supported by a claim proposed by Wannarat (2010) who remark that grammar instruction through songs could be helped the student to comprehend language structures because the lyrics that used in learning management shown the sentence structures clearly. In addition, singing and listening to music also could be encouraged students' grammar learning. According to Yuliana (2003) claimed that singing a song is considered a pleasing achievement by learners and since the words are repeated several times, they are easily

memorized. According to Saricoban & Metin (2000), further stated that a song is full of phrases and expressions that will prepare children for using genuine language. It teaches grammar and many songs can be used as grammar exercises. Finally, Murphey (1992), songs can also be useful tools in the learning of sentence structures and sentence pattern due to songs can be related long-term memory for the learner.

Finally, a fun-filled and relaxing learning atmosphere could be another factor which developed students' English grammar achievement. According to Richard-Amato (1996), even though games are often associated with fun, we should not lose sight of their pedagogical values. Games are effective because they provide motivation, lower students' stress, and give them the opportunity for real communication. As Hadfield (1990) confirmed that games provide as much concentrated practice as a traditional drill and more importantly, they provide an opportunity for real communication, students have an opportunity to drill and practice using grammatical rules and other functions in the real world. According to Lo and Li (1998), offered similar suggestions, songs provide a break from classroom routine, and that learning English through songs develops a non-threatening classroom atmosphere in which the four language skills can be enhanced. The belief that songs provide enjoyment and develop language skills. As Ayotte (2004) has emphasized the effects of using songs on grammar acquisition believing that songs are beneficial in language classrooms as they provide learners with a non-threatening learning environment. With all these claims, it could be concluded that learning management with games and songs are effective for the enhancement of English grammar learning. This research is a study of English grammar achievement for sixth grade students of Sarasas Witaed Bangbon School using learning management with games and songs. The results can be discussed as follows:

7. Suggestion

(1) Limitation

Teachers should select songs with fun rhythm, the experiment showed that students were more interested in rock music than in pop music. However, teachers should choose a song that is suitable for learner's age. Especially, students will enjoy singing famous songs.

For learning management using games, teachers should set the rules that give all students a chance to play games and don't make noises to disturb other classes. Teachers must inform the purposes of the game to develop knowledge, skills and fun. The scores from the game should not be allowed to affect the grade of the student, otherwise, the students will be stressed.

Teachers should select games, adapt to make them interesting and suitable for students. Teachers may design games that allow learners to think creatively. Students will be interesting and challenging.

(2) Recommendations for future research

There should be a study of learners' satisfaction with learning management using games and songs. The attitudinal component may affect English language learning achievement.

In the future studies, there should be the study of English learning achievement using learning management with the online game to be consistent with the 21st century.

8. Acknowledgement

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The Maximizing of Airline Revenue Through Loyalty Program

Sanhakot Vithayaporn (Author)

School of Business Administration, Sripatum University

Email: sanhakot.vi@spu.ac.th

Kitsakul Jatanaviboon (Co-Author)

School of Business Administration, Sripatum University

Email: kitsakul.ja@spu.ac.th

ABSTRACT

There is a huge amount of competition in the airline business and airlines attempt to improve their products and services for organizational success. This includes customer marketing programs. In particular the loyalty or frequent flyer program (FFP) has become a tool to gain customer retention, therefore this article aims to study how airlines can leverage frequent flyer programs effectively to reduce cost and optimize the benefits to both sides, the customer and the organization in this new era of 4.0 marketing. The result shows that FFPs are increasingly run as an independent profitable department of an airline in terms of gross billing, greater brand awareness, revenue contributes to airline in the form of advance miles purchase. The recommendations in this study will help airlines to streamline their FFPs to maximize their profitability by leveraging, appending and creating the loyalty program for the purpose of customer retention for long term sustainable business success.

KEYWORDS: Loyalty program, Frequent Flyer, Airline Marketing, Revenue, Partner Marketing

1. Introduction

For the last couple of decades as a result of the fast-growing airlines industry both domestic and international carriers are competing in a very competitive market environment. This has caused some airlines to have a very low revenue and profit margin that impacts the collapse of the airlines industry compared to other businesses (Doganis, 2009). Also, the changing of air transport regulation is getting more dynamic and strictly in operation hence the airline business both full service and low-cost need to create their strategy to respond the change and sustain their business. Customer marketing program is the tool for airline industry particular Airline loyalty programs, called frequent flyer programs (FFPs), was first implemented in USA for three decades ago and have continually evolved until present, as today, FFPs are the major strategy from airline to retain customer loyalty and of course FFPs can work independently to be profitable and increase revenue potentially center by airlines. The loyalty programs define as the accumulate program that allow consumer to collect their reward and

can be redeemed their reward later in the different scheme of reward hence an airline's frequent-flier program represents a typical loyalty program, focusing on long-term established customer relationship. In contrast to loyalty programs that are designed to create a future orientation and increase switching costs over the long run (Kim, Shi, and Srinivasan 2001; Lewis 2004). Since American Airlines launched the first loyalty program in United States of American on 1 May 1981.

Airline loyalty program needs to conduct a thorough the marketing strategy which blending into their 4P marketing mix- product, price, place, and promotions which mean FFPs can add long-term value and competitive advantage to the airline. Thus, FFPs should be a part of a larger, holistically well-conceived strategic business plan. The airline also needs to take into account regional distinct and customer preferences to fine-tune the loyalty program and explore alliance partnerships. This paper discusses the elements for setting up a best-in-class frequent flyer program. It also explores the value proposition through offshore member service center solutions, and campaign management, data management, and research and analytics services. This paper purpose to help airlines leverage FFPs effectively by customizing them for various customer segments also how to streamline airlines' FFP processes, reduce costs, optimize campaigns, and simplify the redemption process through automation and chat or call center support as the marketing 4.0 era all about digital format thereby, the simplify of FFPs' process to reduce the complication and optimize the effectiveness.

From the figure the evolution of FFPs since the first launch from three decades up to date.

The evolution of loyalty program FFPs

1	2	3	4	5
Beginning in 1981, the world's first mileage based FFP was launch in the USA.	Airlines leverage their loyalty program to be more optimize with partner e.g. alliance, credit cards and fuel companies.	In the 90 century airline alliances was implemented by consolidating and todays' three major alliances are Star Alliance, One World and Sky team.	Strategic on FFPs have evolved from being a tool to promote loyalty for airlines to becoming independent profit Centers.	The number of FFP members is significant increasing, the increasing value of FFPs and reduce the cost, increase revenue, profitability

Figure 1: the evolution of FFP

2. Objectives

- (1) How airline leverage frequent flyer program effectively to reduce cost and optimize Program
- (2) How frequent flyer program maximize revenue and profitability

3. Title (1)

How do frequent flyer programs work to leverage the program effectively in order to reduce cost and optimize program. In the case of most airlines find the issue to manage their in house loyalty program for instance, High maintenance cost of FFPs IT program, no flexibility, slow of interfaces with partner, lack of customer information at the customer touch points, poor integration with the revenue management function, less of digital campaigns activity FFPs have evolved since the world's first airline mile-based loyalty program was launched in 1981. Today, most airlines tie up FFPs with their diverse alliance partners ranging from other airlines, credit card providers, mortgage, car hire and finance companies to fuel companies, hotels and even grocery supermarkets to optimize the program. The traditional way frequent flyer programs worked was to offer air miles rewards. The longer (more miles) your flight, the more mileage points you accumulated. Although many airlines still have air miles reward schemes as a way to reward loyal passengers, there is another frequent flyer trend to watch out for. Some airline loyalty programs now work on a "get points for the amount you spend" basis. So instead of rewarding how far you travel, you're rewarded based on how much money your flights cost. This trend is apparently set to continue over the next few years, so bare that in mind when you research your frequent flyer options! As the traveler, the best thing about being frequent flyer program member is that the program allows you to get the benefit thus it is important to select out which is the best airline frequent flyer program for you to ensure that you have no risk of losing any money. There are few things to consider when customer need to select the best loyalty program as include:

Airline Alliances

An airline alliance defines as an agreement between two or more airlines to cooperate in the degree of significant activities (Gaggero and Bartolini, 2012). Airline join alliance for a several reasons such as firstly, alliance members gain the benefit in terms of economics scale and density without havening to invest more aircraft, alliance members can also extended their route network by conducting code sharing strategy, secondly, airline alliances might combine marketing and branding tactics to perceive customers connections under codeshares strategies. Finally, alliance members can benefit from this alliance by offering benefit to customer especially frequent-flyer programs which is tangible, while the interline agreement is one of alliance strategies consequently airline alliances will lower the fares under interline flights which compensates for the fare increases on inter hub flights (Brueckner, 2001; Brueckner et al., 2011). Airline Alliances member also benefit to customer for gaining more and more mileage rewards by earning frequent flyer points not just for single account but from the several different carriers for instance, if customers are member of an alliance loyalty program they can earn mileage from the alliance member. Alternative Airlines can filter your search to show you all the flights available that will earn you frequent flyer points. For example, if you're a member of the [American Airlines](#) loyalty program

"AAAdvantage", you can filter your search by their alliance, one world. This will immediately show you which flights will allow you to collect those precious frequent flyer points. (WNS Global Services, 2015).

4. Title (2)

Why airline need FFPs There are several strategic reasons for most of airline to develop and nurture loyalty programs including Low Cost Carrier (LCC) have improved their loyalty program as the business strategic to growth their revenue performance.

FFPs are the profitable business: Airline usually have revenue plan to sell top-up miles, sell miles to any customer to upgrade their tier to the higher level to gain any other benefit and the result from survey shows that with an estimated value of USD 14 billion, to their own FFP members as well as partners that is a hug revenue from FFPs strategic hence most of airlines focus on development of their FFPs. A substantial portion of the miles that accrue on airline FFP accounts currently come from non-travel partners e.g. hotel, car, and attractions. It is proved that **FFPs offer the best ROI:** FFPs have been found to offer a higher return on investment (ROI) as compared to several other customer relationship management (CRM) initiatives particularly in the airline industry FFPs seems the main portion of CRM however it has been developed from time to time as nowadays FFPs become independent business unit to profitable.

There are more research about FFP strategies from the practical rather than the academic side for instance, one of the research company called Bain & Company's findings indicate that increased customer retention significantly improves a company's profitability more benefit than to acquire new customer is harder even though only 5% increase in the customer retention that results in a 25-100 of profitability. In the airline corporate strategy to increase the frequency business travelers by engaging to the FFPs as the powerful tools in the airline as business traveler frequently travel on the premium class which usually paid by company hence this customer segment is very vital for airline to increase this market share.

How FFPs generate revenues: The driver of revenues from FFPs as following:

- To leverage the premium class travel that lift a significant of high yield revenue
- To enhance the business-to-consumer (B2C) by saving airline distribution costs and resources such as travel agents' commissions, global distribution system fees, and reservation agents' effort and time.
- Build brand image of airline through branding in airport lounges, regular mail campaigns, point of purchase displays at airport check in, etc.
- Using FFP data base to leveraging the CRM initiatives
- Drive revenue from sale of the FFP database to marketing companies

- Unlock FFP brand value when listed independently. FFPs become more valuable than the airline itself when airlines resort to independent listing or outright sale of FFPs.

5. Conclusion

Revenue streams from FFPs and Airline FFPs provide several revenue streams that help in creating a commercially feasible the effective loyalty program. FFPs have achieved considerably greater awareness among travelers consequently frequently flyer miles were more popular than other loyalty program compares to airlines, In addition, FFP members found that the several of aspects of the program contributed positively lifestyle (Long et al., 2003). As a logical members of FFPs were willing to pay more for ticket, as much as, 6% premium hence it demonstrated that between various groups of travelers e.g. business, holiday and visiting friends/relatives the business segment showed out for its willingness to pay at least \$125 more to fly on an airline where they hold an entire frequent flyer account to gain their fully mileage accrual (Hess et al., 2007). A loyalty program can be a great and powerful tool to enhance your business and bring more profit to your company. However, to make it successful it's crucial to specify and define business objectives; loyalty programs are to increase the business profitability and to transit business partners to become loyal to the brand. This paper will present the summary of how FFP's revenue generate in the overview as follow:

Overview of FFPs revenue generate

Category	Description
Gross billing	The proceed of selling mileage to partner including core airline partner e.g. case of Air Canada sell their program Aeroplan to Aimia
Advance purchase of miles	The payment in advance from partner for miles that will be earned in the future on the card e.g. credit card company purchase miles from Airlines for their new acquire customer Revenue recognize form redemption or expire of miles
Revenue attribution of miles	One-off payment in recognition of entering, extending or reaching the preset target This kind of revenue may not be directly related to the use of mile but for example the use of brand
Bonuses	Proceed from the sales of miles which will be deferred until the miles are redeemed or expired
Commission or marketing revenue	
Deferred revenue	

6. Recommendation

Customer behavior within program is recommended to focusing on besides outside the

program, Airlines must create the strategies to increase the retention from current customer turn to more revenue and profitability, three step of an innovative should be addressed as following

1. Leveraging current loyalty membership data, acquired new enrollment.
2. Appending anonymized aggregated behavioral spending data from external sources to internal loyalty program data, to create better segments and personas, and to inform new offer design;
3. Creating propensity models with appended data files to discover which segments are most likely to respond favorably to personalized offers

Travel loyalty programs, like most marketing initiatives in the current business environment, depend on data. Not the big data concepts that have dominated recent thinking. Big data is most useful when it becomes smart data. By using smart and relevant data culled from reliable and secure sources, travel companies can create relevant offers. And it is only these most relevant offers that will move the inactive customers into the active category. With the changing dynamics of the loyalty landscape, that's the only category that matters.

Revenue potential

Having a deeper view into spending behaviors can unlock both positive and negative potential. For example, anonymized transaction data may reveal that a loyalty program member a) rarely flies; or b) already does 100% of their flying with you. Either way, such personas or segments can't be leveraged further. That reflects a larger trend of falling engagement rates with loyalty programs in general. According to the 2016 Colloquy Loyalty Census, in the U.S. the average household now belongs to nearly 30 loyalty programs but actively participates in less than half of them. Colloquy said, "The slipping rates must be on loyalty marketers' radar, with an eye to the habits and practices that dilute them:

- Focusing on customer acquisition and ignoring customer engagement
- Thinking merely of strategies aimed at loyal behaviors and not asking what customers need
- Assuming that a one-size-fits-all program is sufficient, neglecting opportunities to make customers' experiences truly personal
- Lumping high-value and high-potential customers in with the overall loyalty membership, missing the chance to use analytics to recognize their significant roles. And, often, having the best customers subsidize the worst in the form of diluted benefits and generic experiences" This is precisely the point at which anonymized transaction data can illuminate segments that are engaging frequently with other brands. That reveals loyalty program potential which can be engaged with persona building and targeted, personalized offers.

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**Serial Mediated Effects of Motivation and Work Values
in Influencing Self-esteem towards Effectiveness of Volunteers
at Saint Peter's Church, Samphran, Nakhon Pathom**

Vilasinee Chobsa-ard

Manager, Group Governance Section, Corporate Strategy and Planning Group

Bank of Ayudhya Public Company Limited

E-mail: gift.church@gmail.com

Dr. Thanyanan Boonyoo

Lecturer, Doctor of Business Administration Program, Southeast Asia University

E-mail: thanyanan7@gmail.com

ABSTRACT

This research is aimed (1) to examine the level of self-esteem, motivation, work values, and effectiveness of volunteers, and (2) to determine the serial mediated effects of motivation and work values in influencing self-esteem towards effectiveness of volunteers at Saint Peter's Church, Samphran, Nakhon Pathom. This research was a quantitative study and was conducted, using a survey questionnaire instrument, with a sample of 312 volunteers at the Church. The statistics used in analysis of the data were percentage, mean, standard deviation, and structural equation modeling (SEM) applied in the so-called PLS-Graph 3.0. This research found that (1) the level of effectiveness, work values, self-esteem, and motivation were high, respectively; and (2) the results of the serial mediated effects of motivation and work values had positive and significant impact in influencing self-esteem towards effectiveness of volunteers.

KEYWORDS: self-esteem, motivation, work values, effectiveness

1. Introduction

Christianity, also known by Christians as the Christ, is an Abrahamic monotheistic religious group based on the life and teachings of Jesus of Nazareth. According to the books of the Bible, its believers affirm that Jesus is the Son of God, who came to the world as the Messiah (Christ), the Logos, and the savior of humanity. Today, the three primary divisions of Christianity are the Catholic Church, Protestantism, and the Eastern Orthodox Church; however, there are other present and historical Christian groups that do not fit neatly into one of these primary categories. A broader distinction that is sometimes drawn is between the culture and

ideas of an individual. The Catholic Church, also known as the Roman Catholic Church, is one of the oldest religious institutions in the world. It has played a prominent role as the largest Christian church with a growing number of baptized believers worldwide (Arpondratana, 2014, p. 1).

Saint Peter's Church is located in Samphran district, Nakhon Pathom province and belongs to the 5th administrative district under Archdiocese of Bangkok. It is the first Roman Catholic church built in this area. All aspects of Catholic life and practice are very largely dependent on the church; thus, the church is a special place for unity. When there is a place where cooperation and collaboration are needed, it is essential to have people for volunteering. Each church usually covers a nearby area and is responsible for Catholics living in the area; that is, there are the priests taking care of them. Additionally, the various aspects of volunteering are different from the general work requirements. For these volunteers, there are no salary, no promotion, no payment of pension, no other benefits, no specific working hours or times, etc. (Changkaew, 2014, p. 3). By means of this, volunteer works performed for the church are based on personal responsibility, attention, awareness, and mindfulness as a good Christian perspective. Individual productivity is an important matter that leads directly to goal accomplishment (Fiedler, 1967, p. 11; Reddin, 1971, p. 3). This success is considered to have been based on the various factors that influence job performance effectiveness. Self-esteem illustrates the strong apparent benefits and the outcomes of making an individual feels good when doing something for the benefits of others, communities, society, and ultimately country. It also makes a person feel that he/she is rewarded with happiness. By volunteering and developing a positive attitude toward life, this self-efficacy affects job motivation and performance to effectiveness (Cherian & Jacob, 2013, p. 80).

Motivation is a psychological process or phenomenon which energizes and activates an individual to have a positive attitude toward work. It arises from feeling of needs and wants of an individual and causes goal directed behavior in certain ways. If individuals are motivated enough, they will strongly dedicate themselves to work as hard as possible (Tampu & Cochina, 2015, p. 812). Moreover, work values have to do with the beliefs and ideas of an individual that the actual tasks involved in doing valuable work are important. The outcome happens because of specific behavior to achieve the organization goals and to help an organization achieve the long-term goals (Ho et al., 2012, pp. 64-65).

For the above-mentioned statement and significance of problems, the researcher is interested in studying the serial mediated effects of motivation and work values in influencing self-esteem towards effectiveness of volunteers at Saint Peter's Church, Samphran, Nakhon Pathom. This research was undertaken in order to study the level of self-esteem, motivation, work values, and effectiveness of volunteers, and to utilize the research findings as a guideline in planning, promoting, and supporting the execution of volunteer works to make the administrative management more effective.

2. Objectives of the Study

(1) To examine the level of self-esteem, motivation, work values, and effectiveness of volunteers at Saint Peter's Church, Samphran, Nakhon Pathom.

(2) To determine the serial mediated effects of motivation and work values in influencing self-esteem towards effectiveness of volunteers at Saint Peter's Church, Samphran, Nakhon Pathom.

3. Literature Review

After reviewing the literature, principles, concepts, theories, and related research studies, the researcher has summarized as the following:

(1) Self-Esteem (SE) reflects a personal judgment of the worthiness that is expressed in the attitude which an individual holds towards oneself. An individual's overall subjective emotional evaluation encompasses beliefs about his/her own capability and significance (Coopersmith, 1981, p. 5), that leads to a feeling of self-worth, self-respect, self-regard, self-admiration, and self-integrity. Many people in modern era enjoy a better lifestyle and do not have the time for volunteer works. Self-esteem is an important variable that affects various aspects of life in making an individual acceptance and very motivating for doing volunteer works efficiently and effectively. Cherian & Jacob (2013, p. 80) found in their study that self-esteem influences work-related motivation and organizational effectiveness. Self-esteem, as a distinct psychological construct, is a sense of self-determination and a basic human need or motivation. If an individual is motivated for working, its motivation can affect performance (Canrinus, 2012, p. 115; Lunenburg, 2011, p. 1). In line with this, the following hypotheses were formulated.

Hypothesis 1 (H1) Self-esteem has an influence on motivation.

Hypothesis 2 (H2) Self-esteem has an influence on effectiveness.

(2) Motivation (MO) reflects a personal willingness to make best effort in order to accomplish the organizational goals (Robbins, & Coulter, 2005, p. 392). Motivation is an essential part of building an increasingly positive environment and constantly striving to make the individuals inspired and motivated to volunteer effectively and comfortably (Tampu & Cochina, 2015, p. 812). Elizabeth & Kwesi (2016, p. 255) found in their study that a high level of intrinsic and extrinsic motivation has effects on work values and significantly leads to effectiveness. Tampu & Cochina (2015, p. 812), in addition, found that human motivation forms a foundation for work values, behavior, and discipline. Intrinsic and extrinsic motivation can help build highly volunteering willingness and work effectiveness capacity. Based on the discussion above, the following hypothesis was formed.

Hypothesis 3 (H3) Motivation has an influence on work values.

(3) Work Values (WV) reflect common personal attitudes towards the belief that work is valuable and important, as well as plays a significant role in influencing the emotional response of individuals in an

organization (Ho et al., 2012, pp. 64-65). They can make major changes in overall personality and behavior, particularly job involvement, organizational commitment, and professional expertise to create different working attitudes. Ueda & Ohzono (2012, p. 98) examined the impact of work values on work outcomes and observed that work values generally have a positive effect on work outcomes. However, they produce different results in different working conditions and the values of each working category could not be compared. The difference of work values labelled as challenging job and self-actualization had significant effects on effectiveness labelled as sense of growth, perceived task performance and perceived human relations skills. From the above the following hypotheses were given.

Hypothesis 4 (H4) Work values have an influence on effectiveness.

Hypothesis 5 (H5) Motivation and work values are serial mediated effects in influencing self-esteem towards effectiveness.

(4) **Effectiveness (EF)** is positively influenced by the degree of self-efficacy and results in success when an individual experiences one's work as meaningful. Such efficacy is connected to self-esteem and effectiveness that play a key role in determining organizational values (Cherian & Jacob, 2013, p. 84) and in using resources within an organization to integrate knowledge, technical skills, expertise, and experience for managing results as determined by an organization (Boonyoo, 2018, p. 43). The effectiveness of individual work is important, by itself, as it makes up an entire teamwork, participation, and contribution to enhance organizational productivity (Salman et al, 2016, p. 137).

4. Conceptual Framework

Based on the aforementioned literature review, the conceptual framework for this study is presented below.

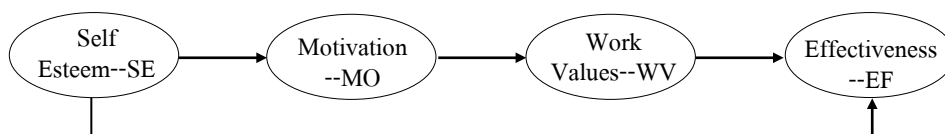


Figure 1 Conceptual Framework

5. Research Methodology

In this study, the researcher used quantitative methods that focus on identifying facts and measuring numerical analysis conclusion. A survey questionnaire was used as the data collection instrument to affirm the hypotheses in studying the serial mediated effects of motivation and work values in influencing self-esteem towards effectiveness of volunteers at Saint Peter's Church, Samphran, Nakhon Pathom. The main stages of research methodology are as follows.

5.1 Population and Samples

The population consisted of 1,426 volunteers at Saint Peter's Church, Samphran, Nakhon Pathom (Archdiocese of Bangkok, 2560), whereas the sample size of 312 volunteers was calculated by using Taro Yamane formula with 95% confidence level with sampling error assumed at $\pm 5\%$ (Yamane, 1973, p. 724) and by using stratified and simple random sampling drawn from each stratum.

5.2 Research Instrument

The format of a typical five-level Likert item was used to make the sum of responses according to a Likert scale (Likert, 1932). A questionnaire with a checklist was used and it had five sections: demographic profile of the respondents, the level of self-esteem, motivation, work values, and effectiveness.

5.3 Data Collection

The questionnaires were distributed to 312 volunteers at Saint Peter's Church, Samphran, Nakhon Pathom, and the responses, with a 100% response rate of returns, were collected.

5.4 Data Analysis

The statistics used in this research were percentage, mean, standard deviation, and structural equation modeling (SEM) applied in the so-called PLS-Graph 3.0 (Chin, 2001).

6. Summary of Research Findings

(1) The demographic profile of the samples indicated that 68.59% of the respondents are female, 22.76% represented the age group of 41 to 50 years old, and those 48.40% are single. 32.69% of the respondents hold a bachelor's degree as their highest level of education qualification. Meanwhile, most of the respondents, 40.06%, have average monthly income of less than 10,000 Baht.

(2) The level of effectiveness was found to be at a high level ($\bar{X}=4.18$, $SD=0.688$), followed by work values ($\bar{X}=3.98$, $SD=0.644$), self-esteem ($\bar{X}=3.97$, $SD=0.612$) and motivation ($\bar{X}=3.89$, $SD=0.668$) respectively.

(3) The result of structural model test is an analysis of direct and indirect regression coefficients for effectiveness (EF) as shown in Figure 2.

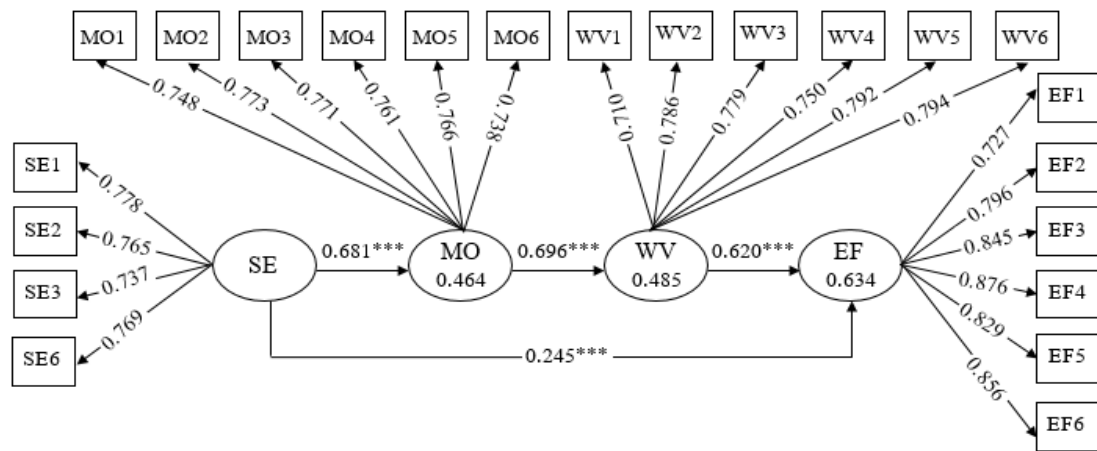


Figure 2 Relationship of Structural Equation Modeling

From the above structural equation modeling of the overall factors influencing effectiveness (EF), it was found out that self-esteem (SE) and work values (WV) had a direct effect to effectiveness (EF) at the coefficient level of 0.245 and 0.620, respectively while self-esteem (SE) and motivation (MO) had an indirect effect to effectiveness (EF) at the coefficient level of 0.293 and 0.431, respectively. Regarding the overall factors that influence work values (WV), it was found that motivation (MO) had a direct effect to work values (WV) at the coefficient level of 0.696 while self-esteem (SE) had an indirect effect to work values (WV) at the coefficient level of 0.474. Regarding the overall factors that influence motivation (MO), it was found that self-esteem (SE) had a direct effect to motivation (MO) at the coefficient level of 0.681.

The results of hypothesis testing, according to the above structural equation modeling for the overall factors that influence on effectiveness (EF) of volunteers at Saint Peter's Church, Samphan, Nakhon Pathom, are summarized in Table 1.

Table 1 Results of testing hypotheses

	Hypotheses	Coefficients	t-test	Results
H1	SE → MO	0.681***	21.786	Supported
H2	SE → EF	0.245***	4.452	Supported
H3	MO → WV	0.696***	20.140	Supported
H4	WV → EF	0.620***	10.992	Supported

Notes: (* refers to p-value ≤ 0.10 or $t \geq 1.65$) (** refers to p-value ≤ 0.05 or $t \geq 1.96$) (***) refers to p-value ≤ 0.01 or $t \geq 2.58$)

Table 1 above shows that (1) self-esteem (SE) had an influence on motivation (MO) and effectiveness (EF), with the t-test value of 21.786 and 4.452, respectively; (2) motivation (MO) had an influence on work

values (WV), with the t-test value of 20.140; and (3) work values (WV) had an influence on effectiveness (EF), with t-test value of 10.992.

(5) The result of an indirect effect, through moderator variables, that affects the strength of the relationship between independent and dependent variables in correlation, is summarized in Table 2.

Table 2 Results of an indirect effect through motivation (MO) and work values (WV)

Hypothesis		Effect	Boot SE	Boot LLCI	Boot ULCI
H5	SE → MO → WV → EF	0.548	0.058	0.443	0.669

Table 2 above shows the results of an indirect effect through motivation (MO) and work values (WV) that affects the strength of the relationship between self-esteem (SE) and effectiveness (EF), with Boot LLCI and Boot ULCI values, was not equal to zero. It is indicated that motivation (MO) and work values (WV) had positive and significant impact in influencing self-esteem (SE) towards effectiveness (EF), with Boot LLCI and Boot ULCI values of 0.443 and 0.669, respectively.

7. Discussions

This study has classified the research findings into each factor as follows:

(1) For self-esteem factor, this study confirms that this factor significantly has direct effect on motivation and effectiveness. This is because volunteers at the Church have different positive behaviors and their behaviors varied in a changing environment, thus, making the behaviors interchangeable and helping to motivate a group of people or individual. In consonance with the findings found by Cherian & Jacob (2013, p. 80), self-esteem was found to influence work-related motivation and organizational effectiveness. Self-esteem, as a distinct psychological construct, is a sense of self-determination and a basic human need or motivation. If individuals are motivated toward work, this motivation can affect their job performance (Canrinus, 2012, p. 115; Lunenburg, 2011, p. 1).

(2) For motivation factor, this study confirms that it significantly has direct effect on work values. This is because the Church has an effective administrative management to build a proper operational process, which leads to full participation and positive attitude of work values. As contended by Tampu & Cochina (2015, p. 812), motivation is an essential part of building an increasing work values. Both intrinsic and extrinsic motivations enhance the willingness to perform volunteer works and an ability to work effectively.

(3) For work values factor, this study confirms that it significantly has direct effect on effectiveness, and motivation and work values have positive and significant impact in influencing self-esteem towards effectiveness. This is because the Church builds a positive behavioral attitude that leads volunteers to an

environment of anticipation and respectfulness towards the commitment to work effectively for the Church. As revealed by Ueda & Ohzono (2012, p. 98), who examined the impact of work values on work outcomes, work values generally have a positive effect on work outcomes. The difference of work values labelled as challenging job and self-actualization had significant effects on effectiveness labelled as sense of growth, perceived task performance and perceived human relations skills.

8. Recommendations

From the research findings, the researchers would like to give some suggestions as follows:

8.1 Implications of the study

(1) This research found that self-esteem is a psychological process or phenomenon which energizes and activates an individual to have a positive attitude toward work. The Church need to promote positive behavior and attitude, and to build a strong foundation in creating values that leads to volunteer motivation.

(2) This research found that motivation had positive and significant impact in influencing work values towards effectiveness. The Church need to build motivation that leads to commitment and satisfaction that can result in achieving the common goals.

8.2 Suggestions for further study

(1) There should be a study of other related factors: such as, job engagement, job satisfaction, etc. to enhance the learning process and work values that can increase effectiveness.

(2) The results and benefits of the study should be applied to other relevant population groups.

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INVESTING IN WATER RESOURCE INFRASTRUCTURE AND THAILAND'S ECONOMIC GROWTH

PIAMCHAN DOUNGMANEE

Faculty of Industrial Technology Suan Sunandha Rajabhat University

E-mail: piamchan@yahoo.com

MONNAPATT SIKHAO

Faculty of Humanities and Social Science Phranakhon Rajabhat University

E-mail: monnapatt@gmail.com

ABSTRACT

Water resources are essential to the economic growth of a country. The objectives of the present paper are to evaluate the magnitude of the impact of water resource investment on the whole economy, and to analyze the impact of the national policy on water resource infrastructure by using Leontief Input-Output analysis. The data of the 2010 Thailand Input-Output table is used as database (latest version). The results show that the backward effect of water investment on other sectors is 2.8, meaning that investing one unit in water resources infrastructure leads to 2.8 units of Thai economic expansion. In addition, Thailand's GDP increases by 7.2 percent.

KEYWORDS: Input-Output Model, water resource investment, water resource budget

1. INTRODUCTION

As Thailand is an agricultural-based country, its water resource infrastructures, i.e. dams, reservoirs, and irrigation systems, are essential to ensure economic growth and development. Water resource infrastructure represents a kind of public work that is a type of the construction sector. It is an essential basic infrastructure that requires large budget to invest and create large number of employments. The government is thereby the main agent for investing in the area. Much of the literature has confirmed that spending on the construction sector results in a large impact on the entire economy (in the connection see Pietroforte and Gregori (2003), Su, Lin and Wang (2003), RémyPrud' homme (2004), Liu and Song (2004), Song and Liu (2005), Wu and Zhang (2005), Dantinho and Silva (2006), Rameezdeen, Zainudeen and Ramach (2006), Song and Liu (2007), Kofoworola and Gheewala (2008)). Although the construction sector shares only 15 percent to the GDP and is ranked third from the bottom (NESDB, 2015), the sector has a large impact on the entire Thai economy with the backward linkage

of 3.2 (Kofoworola and Gheewala, 2008). Therefore, spending on the construction sector has been done by various governments to stimulate the country's growth.

Large numbers of existing studies have investigated the importance of the construction sector on economic development. Some of them focus on the impact of water resource investment on the entire economy. For example, Frone (2001) explains that improving access to the water infrastructure has helped to develop the society and economy in Romania. Cuihong (2002), using the IO model, finds that investing in the water sector relates to the development of other sectors, including job increases in China. The World Bank (2007) has revealed that investing in water infrastructure, especially in the agricultural sector, results in poverty reduction and economic growth in the Sub-Saharan African countries.

For Thailand, there has been a great deal of researches done on water resource in various areas. For example, Boonkerd Budhaka and Manu Srikajorn (2002), and Sutapa Amornvivat (2003). However, none of such researches has studied the impact of water investment in the country. Therefore, to fill this gap, the paper pioneers in studying the impact of the water infrastructure investment on the entire Thai economy, in term of ascertaining the magnitude of the impact of water resource investment on the entire Thai economy. In addition, the annual national budget for water resources is evaluated to analyze the impact on the economy as a whole.

The fast and intensive expansion of the economy during the early stage of the country's development, resulted in large demand as water resources is the factor of production in agriculture and in the non-agricultural sector. As water resources are limited, resulted in large problems, i.e. water shortage, water pollution, and water allocation conflict. National water policy and measurements framed by the Royal Irrigation Department (RID), the Ministry of Agricultural and Cooperation, were implemented in Thailand to support such development. RID is the major agency concerned water resource in Thailand. Therefore, the paper use the RID's budget for calculation.

The hypothesis of the study is "Spending on the water resource infrastructure creates growth for the country." The research questions are "What is the magnitude of the impact of water sector investment on the entire economy?" and "How much of the economic expansion of the country?" Leontief Input-Output analysis is adopted in this paper as the methodology. The database consists of the 2010 Thailand Input-Output table with 180 sectors, the latest version. The objectives of the paper are to (1) evaluate the magnitude of the impact of water resource investment on the whole economy, and (2) analyse and measure the impact of the national policy on water resource infrastructure.

This paper focuses on the water resource investment, which is a kind of agricultural public work. Public work is a type of the construction sector. Under the 180 sectors of the 2010 Thailand Input Output Table, agricultural public work was sector number 140. In the study, the pull and push effects calculated from backward and forward linkages were examined to see the impact of the investing in water resource infrastructure on the

entire Thai economy. It is hoped that this paper would help in the effective use of water, which will hopefully lead to sustainable water management of the country.

2. OBJECTIVES

- 2.1 To calculate the magnitude of the water resource investment on the economy.
- 2.2 To evaluate the impact of the annual national budget for water resources on the economy

3. WATER RESOURCE INVESTMENT AND ECONOMIC GROWTH IN THAILAND

The water resource infrastructure plays an important role in the Thai economy as can be seen from the first National Economic and Social Development Plans (1977-1981) up until the current 12th plan (2017-2021). At the period of the first national plan, various kinds of basic infrastructure, including water resource infrastructure had been constructed to support the rapid growth of the country. The large and medium scale irrigations, and hydro power were constructed to increase the country's new irrigated areas to store water in the agricultural sector. At that time, total agricultural areas in Thailand is approximately 9.7 million rais. The irrigation area takes up to approximately 3 percent. Later, the country's structure development was transferred to the manufacturing and services sector, which creates a large demand for water, leading to water problems, especially the deterioration of natural water resource. Therefore, in the National Plan No. 4 (2520 - 2524) up until the current 12th plan (2017-2021), the water policy and measurement were changed from focusing on water construction to focusing more on water resource management system, which included people's participation so that they could receive maximum benefit and reach water resource stability in the long run. Thailand's national water plan is the framework of RID. One of the main missions of the agency is to increase the irrigated areas for farmers by investing in water resource containment systems, i.e. dams, levees, reservoirs, and watersheds. Presently, total agricultural areas in Thailand is approximately 149 million rais (FAO, 2013), and approximately 20 percent or 30 million rais of them is irrigated areas. By 2025, Thailand aims to be the world's top-ten irrigated areas (RID, 2017).

In 2017, the annual budget of water resources by RID is about 47,174 million baht, increasing by 1.0 percent from previous year (2016), 46,708 million baht. As a percentage share of the national budget, the public spending on water infrastructure from 2005 to 2017 had average of 1.69. Note that this paper focused on public spending on the water resources of the RID, which is the main government agencies for water resource. The RID is a leading organization in water resource development and integrated water management. It is concerned with canal excavation and water distribution as well as water pumping for cultivated areas.

4. DATA and METHODOLOGY

The paper uses the Input-Output Model, which shows the interrelations of goods and service exchange among different sectors. The analysis shows that the interdependence of production and consumption in an economy is based on the framework of Leontief, who is the pioneer of this framework.

4.1 DATA

The Thailand 2010 input-output table is rearranged in order to measure the impact of water resource infrastructure investment on the country's growth. The base year model is derived from the Thailand input output 180-sector model by excluding the non-public work sectors. The public work for agriculture and forestry (sector 140) is solely investigated. The sector covers the construction and extension of irrigation works for agriculture and forestry, i.e. reservoir and irrigation system. Only new construction is included (NESDB, 2015). Finally, the original 180 sectors are grouped into 8 productive sectors, as seen in table 1.

Table 1 Classification of the 8 Sectors

	Sector (Study)	180 Sectors
1	Agriculture	1-29
2	Industry	32-92,95-134
3	Energy	30-31,93-94,135-137
4	Public Works for Agriculture & Forestry	140
5	Construction and other Public Works	138-139,141-144
6	Finance	160-162
7	Private Service	145-159,163-164,170-178
8	Public Service	165-169, 180

Source: Adapted from NESDB, 2010

4.2 METHODOLOGY

Table 2 shows the framework of the study, which explains the interdependence of the production and consumption of the 8 economic activities within the economy in monetary terms. It also shows the interrelations of goods and service exchange among different sectors and which return produce goods and services that are sold to other sectors. The row of public work of the agricultural sector illustrates the output of the public work that be used by other sectors. The column of public work of the agricultural sector illustrates the input from other sectors that the sector uses in the production process. For example, to construct new irrigation, it needs material such as concrete and glass from the industry sector as an input to the production process. In addition, the output of the sector such as canal and irrigation is not used by other sectors. The total output of 8 sectors (Y) comprises total intermediate output (Ti) and final demand (Fi). The final demand is the goods and services that are consumed by

households, the government, and that are used for investment and export. The total input of the 8 sectors (Y') consists of total intermediate input (T_j) and value added (V_j). The value added of all the sectors consist of labour and capital that used as inputs in the production processes.

Table 2 The Input-Output's Framework of the study

Industry		Intermediate Output		Final Demand	Total Output
		Sector j, j=1,2,...,8	Total Intermediate Output		
Intermediate Input	Sector i, i=1,2,3,...,8	a_{ij}	T_i	F_i	Y
	Total Intermediate Input	T_j			
Value Added		V_j		$F=V$	
Total Input		Y'			

Source: Modified from Liu and Song, 2005: 491

Under the Input Output analysis, the pull effect and the push effect of the agricultural public work sector and other activities in the economy are analyzed. The pull effect of the water investment shows the degree of dependence of water investment on other sectors in the economy. It can be said that the water investment requires construction material from other sectors to use as input for construct of the irrigation system, including hiring labor as workers and capital for the budget. In addition, the goods and services derived from the sector are valuable to other sectors, as they become the input in the production process. The maintenance and repair service shows the push effects of a sector (Su, Lin and Wang, 2003). These effects are calculated from the backward and forward indicators as follows.

The direct backward linkage indicators or the direct input coefficients are the column sums of the technical coefficient that become the total intermediate input (T_j) divided by the total input of all sectors (Y') that is ($\frac{T_j}{Y'}$). In addition, the total backward linkage indicators that take into account both direct and indirect effects generated by interrelationships. It measures the interrelationships of the public work of the agricultural sector and other activities in the economy. The total backward linkage indicators derives from the column sums of the Leontief inverse matrix, $M_j = \sum (I - A)^{-1}$, in which A is the matrix of the technical coefficient.

Besides the pull effects, the push effects illustrate the importance of a sector to the entire economy. The goods and services derived from the sector are valuable to other sectors, as they become the input in the production process. The maintenance and repair service shows the push effects of a sector (Su, Lin and Wang, 2003:719). The pull effects can be measured by the direct forward linkage indicators and the total forward linkage indicators (input multiplier). The direct forward linkage indicators or the direct output coefficients are row sums of the

technical coefficient that become the total intermediate output (T_i) divided by the total output of all sectors (Y) that is ($\frac{T_i}{Y}$). In addition, the total forward linkages indicators are used to measure the interrelationships of the public work of the agricultural sector and other activities in the economy. It is calculated by the row of sums of the Leontief inverse matrix, $M_i = \sum (I - B)^{-1}$, in which B is the matrix of the direct-output allocation coefficients.

5. RESULTS

Figure 1 shows that among 8 sectors, the public work of the agricultural sector was ranked number 4, with the direct coefficient of 0.56 and 0.44 of value added. It can be interpreted that an increase of 100 units of the public work of agriculture, the sector used 56 units of materials from other sectors and 44 units came from the primary input. It can be seen that in constructing a reservoir, machinery expenses were use more than labor cost. This dictates the sector use large amount of money in production.

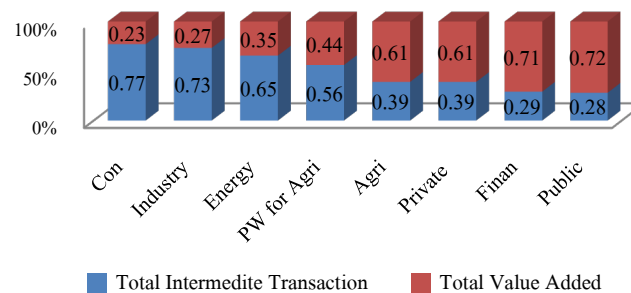


Figure 1 The technical coefficient (Direct Coefficient) of 8 sectors

The Backward Linkage or Pull Effects

Regarding the public work of agriculture, table 3 shows the proportion of the direct input that the public work of agriculture used. In 100 units, the sector used materials from manufacturing at 47 units, followed by the private sector at 3 units. It can be seen that the reservoir used the most material from the manufacturing sector, such as concrete, steel, etc. It can be said that the manufacturing sector and the private service are key water-use sectors.

Table 3 Direct Backward Coefficient of the Public Work of Agriculture

Sectors	Public Work of Agriculture
Agriculture	0.00137
Industry	0.47173
Energy	0.02815
Public Work of Agriculture	-
Construction and other Public Works	0.00001
Finance	0.01850
Private	0.03946
Public	0.00040
Total Intermediate Transaction	0.55961

Source: Calculation

Figure 2 shows the backward linkage indicators, which consist of the direct coefficient and the total direct backward linkage (output multipliers) of the 8 sectors. It can be seen that the public work of the agricultural sector was ranked number 4 in both linkages. This means that the sector depends greatly on the other sectors. The value of the total backward linkages of 2.68 means that the entire economy generates 268 baht when the sector produces 100 baht. Out of 268 baht, 100 was from the direct impact of the expenditures on the sector, while 168 baht was from the indirect impact on other sectors.

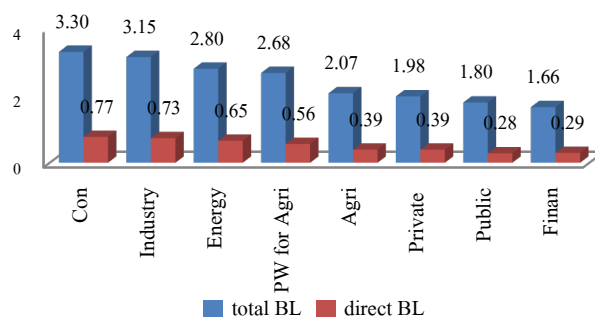


Figure 2 Backward Linkage Indicators and Output Multipliers

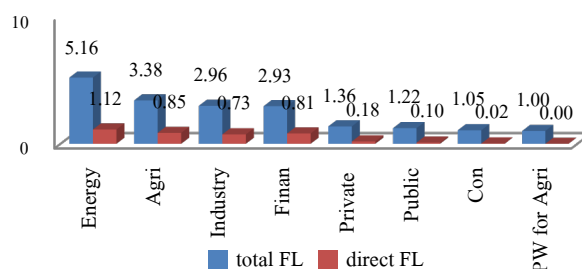
Forward Linkage or Push Effects

Table 4 shows the direct forward linkage of the public work of agriculture, and it can be said that the output of the sector was used by the energy of 1.12 and the agriculture sector of 0.85. This depicts the interdependence between the public work of the agriculture sector and other sectors.

Table 4 Direct Forward Coefficient of the Public Work of Agriculture

Sectors	Direct Forward Coefficient
Energy	1.12
Agriculture	0.85
Finance	0.81
Industry	0.73
Private	0.18
Public	0.10
Construction and other Public Works	0.02
Public Work of Agriculture	-

For the push effect, the public work of agriculture was ranked in the lowest place in both direct and total forward linkages, with the value of 1.0 and 0 respectively, figure 3. The direct forward value of 0.0 means that there is no output unit or service of public work of agriculture were required by other sectors in the production process. That shows the independence of other sectors on the public work of agriculture. In addition, the total forward value of 1.0 means that the entire economy would generate the value of 100 baht when the sector produces 100 baht, and it also means that there are only direct impact of expenses in the public work of agriculture. This is because the output of the public work of agriculture becomes the final fixed capital, as shown in the value chain. This is similar to the analysis of Wu and Zhang (2005) on China's construction sector, which was very low at 1.143.

**Figure 3:** the forward linkage indicators and input multipliers

Conclusion, public work of agriculture plays a significant role in the pull, but not the push effects.

6. POLICY SIMULATIONS

Based on the results of the IO model, the public investment in the public works sector showed a significant impact on the whole economy. Therefore, it is interesting to examine the impacts of the Thai annual water investment budget, which is a type of public works, on the Thai economy. This part analyses the simulation impact from the annual water public spending of the country by using the annual budget of the RID of 47,174 Million THB in year 2017 to study.

In order to determine the economic expansion from the public spending on water resources, the multiplier figure of public work of agriculture calculated in the previous part, was multiplied by the annual budget. Economic growth was measured for analyzing the effectiveness of the policy. Under the IO model, government investment represented the final demand. The government budget injected into the economic system is represented as F_n in the equation. The link of the annual water policy to the IO model is shown by the following equation: $Y_n = (I - A_n)^{-1} F_n$ where $(I - A_n)^{-1}$ is the multipliers, and F_n is the final demand or government spending

7. SCENARIO AND RESULTS

This study consists of two scenarios: 1) the baseline scenario and 2) the government investment of the annual water budget. Table 5 indicates the baseline scenario for year 2017. The value of the total domestic product was 10,729 million Baht. The value of the public works sector was 5 million Baht, approximately 0.05 percent of the total domestic product. This implies that the public works of the agriculture sector is not significant to the Thai economy. However, the construction sector has been accepted by the government to be a leading sector in stimulating the economy. The results showed that country's GDP increased from 10,729 million Baht in the base year to 105,950 million Baht, which is equal to 8.9 percent.

The reason that the public works sector exhibited a large benefit to the country is because the high IO multiplier of 2.68 revealed rather large impacts on other sectors and the overall economy. Due to the fact that the public work sector, covers new water construction, i.e. irrigation system. These activities enrich the healthy growth of the economy through their linkages.

Table 5 Results of the Impacts of the Annual Budget of Public Work of Agriculture on Economic Growth

Sector	Base Case	Billion THB			
		Annual Water Budget		Total Effect	% Increasing
		Direct Effect	Indirect Effect		
Agriculture	430.8	0	19.2	450.0	4.4
Industry	6,234.7	0	372.4	6,607.1	6.0
Energy	1,264.5	0	69.0	1,333.5	5.5
Public Works of Agriculture	5.1	47.2	241.7	294.0	5,641.7
Construction and other	490.3	0	0.4	490.6	0.1
Finance	139.2	0	5.9	145.2	4.3
Private Service	1,888.7	0	14.4	1,903.1	0.8
Public Service	275.3	0	0.9	276.2	0.3
Total Domestic Production	10,728.7	47.2	723.9	11,499.7	7.2

8. CONCLUSION AND RECOMMENDATIONS

It can be concluded that the public spending on water resources increased growth for the entire economy by 7.2 percent. Because of the linkages, the sector consumed large quantities of machinery and energy to convert the raw materials into goods and products. In addition, the project benefits farmer in term of increasing irrigated areas and developing water sources in the irrigated and rain-fed areas. Adequate investment of water resources results in large number of people having access to water and sanitation services. In addition, the sector is an important source for employment.

As water resources are vital factors for both economic development and human-beings, water resource management in Thailand should be carried out holistically for solving the country's problems in both short run and long run, and should be related to the current national economic development plan.

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