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Editor's Note



The aim of RJSH is to publish research work contributing to contemporary social sciences and humanities. We are excited to present to you in this issue eight research articles involving various academic disciplines and practical matters.

In the first article, Sanu Mahatthanadull and Orachorn Kraichak used mixed-method research to study and develop a Buddhist model to enhance the emotional strength of professional nurses. The authors found the model, based on the Buddhist principle of the fourfold development, to be effective in generating a positive change in the mood and emotions of the nursing professionals who had participated in the workshops.

In the second article, Chompoonuh Kosalakorn Permpoonwiwat and Uthai Krawglom conducted a survey to estimate the Willingness to Pay (WTP) for insurance fees of foreign tourists who visited Thailand for road safety and to reduce the risk of road accidents occurring among visitors. The research revealed findings about WTP among foreign tourists and the WTP value which was also acceptable to involved government and private agencies.

In the third article, Chanida Lumthaweepaisal studied the 'transitional experience' of students who left home to live in the new environment of a university dormitory. The author discussed relevant theories and focused on a case of King Mongkut's University of Technology Thonburi, Bangkhuntien Campus, Thailand. The research findings were presented together with the appropriate design criteria for a university dormitory.

In the fourth article, Chirawan Sukwitthayakul and Saneh Thongrin conducted keyword analyses on the English Pali Canon and compared keywords generated by four different reference corpora. The authors presented important findings concerning keywords in these corpora and the major characteristics of the top keywords. This study contributed to the basis for further research in the branch of English for Buddhism.

In the fifth article, Chittima Phutthanathanapa, Wanichcha Narongchai, and Rukchanok Chumnannmak conducted in-depth interviews and used content analysis based on semiology to explain the creation of Naga signs in the Poo Phayanak shrine at the 2nd Thai-Lao Friendship Bridge in Muang District, Mukdahan Province, Thailand. The authors presented the denotation and connotation of the Naga signs and their roles in important practices.

In the sixth article, Chayaporn Boonruangsak examined the social capital and the community potential for a healthy community profile management and studied the guidelines for the sub-district learning curriculum development therein. By focusing on a model local government organization at Phrom Nimit Sub-district, Nakhon Sawan Province, Thailand, the author pointed out significant learning systems and management components.

In the seventh article, Kiatanantha Luankaew and Chavajaree Rieoraengkuson assessed the current scale of fees for lawyers enlisted by the Thai Justice Fund (TJF) to assist people in need of legal aid. The authors' findings suggested that the current scale of fees and the process of ex-ante fee setting had resulted in various disadvantages, thus requiring appropriate adjustments based on actual activities conducted.

In the eighth article, Dan Jefferson B. Lopez examined the relationship between ethics position and global citizenship identity. Focusing on selected first year college students of a private higher educational institution in Cavite, Philippines, the author found significant relationship between the two variables. This highlighted the importance of instructional strategies and activities to enhance global and cultural awareness skills.

We always welcome your manuscripts and appreciate your comments. Links to our manuscript submission site can be found at RJSH Online Submission and Review System: www.rsu.ac.th/rjsh. We look forward to hearing from you and would like to express our thankfulness in advance.

Assoc. Prof. Dr. Thamavit Terdudomtham

Editor-in-chief

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Enhancing Emotional Strength of Professional Nurses: Buddhist Principles and Model

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Abstract

This article is part of mixed-method research that aims to examine the emotional strength of professional nurses, propose Buddhist principles and models for enhancing the emotional strength of professional nurses, and develop a Buddhist model for enhancing the emotional strength of professional nurses. The population Group No.1 was a control group consisting of 50 professional nurses from Samrong Medical Hospital and Samut Sakhon Hospital. While Group No.2 refers to an experimental group consisting of 18 professional nurses from Samut Sakhon Hospital who voluntarily enrolled in the classroom “Joyful Nursing Classroom” whereas the Buddhist principle of the 4 *Bhāvanās* was mainly applied in the classroom. The 6 professional nursing specialists, Buddhist experts, and social experts were also interviewed for content analysis. The results showed that emotional intelligence in Buddhism relies on the concepts and methods of balance, which include the Middle Path, Right Understanding (*Sammādiṭṭhi*), and Right Thought (*Sammāsaṅkappa*), to allow a person to be aware and understand his or her own emotions. For a nurse to perform at the professional standard level, emotional intelligence also requires mindfulness and awareness. A Buddhist model for strengthening the emotional intelligence of nursing professionals was developed from the concept of the Fourfold Development (*bhāvanā*) and applied in a workshop design. The model and the workshop format were evaluated by experts and then used with two nursing populations. The model demonstrated 4 ways to strengthen emotional intelligence among the nursing professionals: 1) self-reflection, 2) development of emotional strength and positive thinking, 3) increase of mental power through meditation, and 4) learning of “caring & sharing” concept and letting go, which was central to the model. The workshops resulted in a positive change in the mood and emotions of the nursing professionals, especially in terms of behaviors, communication, and reasoning.

Keywords: *Emotional Intelligence, Buddhist Model, Nursing Professionals*

1. Introduction

A professional nurse is a very important occupation in today's society as a way of helping people who are sick both physically and mentally. The Buddha also gave importance to this matter. This can be seen from the Buddhist teachings on the care and cleanliness of sick monks. In the story of Pūtigattatissa Thera “Tissa Thera who had a rotten body” in Citta Vaggo, an elder who was left unattended suffering from the disease of pustules growing all over the rotten body with lymph and blood. Without disgust, the Teacher himself ministered to him by bathing, rubbing the body, washing, drying, and helping to don robes for him, etc. (Norman, 1906). with a boundless compassionate heart. The Buddha also allowed the treatment of diseases with various medicines, such as the five medicines (*bhesajja*), namely: ghee, fresh butter, oil, honey, and molasses. “Those medicines which may be partaken of by ill monks” (Horner, 1971). In the concept of treating such diseases, the Buddha focused on mental management due to the fact that the mind is important as shown in the Dhammapada “*Manopubbaṇ gamā dhammā manoseṭṭhā manomayā*” (Hinuber, & Norman, 1994). Mental phenomena are preceded by the mind, have the mind as their leader, and are made by the mind. (Norman, 1997). It should be noted that the term “*dhammā*” in this particular context refers to the four *nāmakhandhas* as evidenced in *Paramatthajotikā* “*Tesu imasmihāne nissattanijjīvadhammo adhippeto. So atthato tayo arūpino khandhā “vedanākkhandho saññākkhandho saṅkhārakkhandhoti. Ete hi, mano*

pubbaṅgamo etesanti manopubbagamā nāma.” which can be translated as “The phenomenal of non-sentient beings (*nissatta*) or inanimate (*nijīva*), the Buddha had already meant here. The *nissatta* or *nijīva* means the three immaterial aggregates, namely: - aggregate of feeling, aggregate of perception, and aggregate of mental formation. Those three *arūpakhandhas* are called having the mind (*viññāa*) as the leader.” (Norman, 1906). Buddhism gives importance to the mind “The world is led by the mind; thought is of all things foremost.” Considering this message, the concept of mind in Buddhism is like Kant’s transcendental idealism which is ready to connect with the mind of a qualified human being (Sigambhirayana, 2013). Human feelings and emotions to have a manner of expressing frustration, stress, and pressure on the mind will be followed by anxiety, anger, lamentation, regret, heartache, and resentment. The symptoms of mental disorders are more or less severe and vary from event to event, individual adherence, and the severity of the problem (Suwansaeng, 2001). These are the maintenance of the material and immaterial. That is to say, it is the management of the five aggregates. These ways of treating patients are life support and palliative feature that characterizes the work and importance of professional nurses in today’s world. Buddhism is an indistinguishable part of Thai society. The concepts, way of life, culture, traditions, and practices of Buddhism have become the cornerstones of development relevant to people of all levels (Abhakaro et al., 2013).

Professional nurses are important people in supporting the lives of patients and relatives. Therefore, the cornerstone of solid nursing emotions is to create satisfaction in the people around you as well as to communicate and exchange information, news, facts, opinions, feelings, and attitudes from one person to another or that group (Senadisai, & Arpanantikul, 2009).

The global society is changing rapidly and becoming more complex with more communication seamlessly with other countries. This situation caused most people to change their behaviors negatively from someone with good manners to someone who has an aggressive temper towards others. It can be seen that those situations reveal their negative behaviors and selves through the expression of unstable inner emotions. Therefore, the emotional strengthening of professional nurses is the heart of the patient screening process, patient discrimination, the care during the waiting period for the treating physician, etc. Therefore, the emotional strength of professional nurses is crucial because the solution to suffering is rooted in the human mind. It is consistent with the concept of Mahachulalongkornrajavidyalaya University to have an educational plan and a policy to create awareness. The objective is to enable all professions to develop their minds and learn Buddhism integrated with modern science. In addition, this research is consistent with the 8th research policy and strategy (2555-2559 B.E.), which has formulated research strategies that are in line with national development guidelines based on the Sufficiency Economy Philosophy. The focus is in line with the changing context and the economic, social, and environmental risks.

From this phenomenon, the Researcher needed to find a Buddhist model that combines with modern science to strengthen the emotional strength of the nursing profession to develop the mind and to learn Buddhism integrated with modern science to add value, and to prepare for future growth. It also contributes to economic, social, and public benefits both at the community and national levels, together with elevating the emotional intelligence knowledge to support the stepping into the ASEAN Economic Community (AEC). In this regard, the nursing profession was selected as one of seven occupations that developed particularly desirable characteristics. It takes both the science and the art of personal health care to create a qualified nurse who is smart and emotionally stable. The key issue of “Professional nurse” reflects a career that has a heavy workload. One nurse has to take care of more than 462 patients, which does not meet the world standard of 300 patients per nurse. When nurses are in shortage, the workload is therefore heavier. As a result, the average number of nurses’ turnover rate has steadily increased by approximately 4% per year (Thai PBS World, 2016).

The heavy workload is due to the nature of the nurse’s work that has to work continuously with rotation operational stress. From the literature reviewed, nurses are among the population at risk of health-threatening factors which has an impact on the mood, irritability, discomfort, discouragement, physical exhaustion, feeling a loss of confidence as well as increased stress levels from caring for patients under a tight economic environment (Cousineau, McDowell, Hotz, & Hébert, 2003) which is considered to have an impact on the health care of the nurses themselves are affected by stress. The most important thing in a nursing career is that nursing caregivers have to accept the patient’s emotions stored in the mind; causing stress due to the practice of nurses is one of the major problems incorporating health policy into the public health system

(Pikó, 1999). The main aim of the study thus was to develop a model for strengthening the emotional intelligence of professional nurses with the mixed research method.

2. Objectives

This study was conducted to understand enhancing the emotional strength of professional nurses with the Buddhist principles and Model. The objectives of this study are listed as follows.

- 1) To examine the emotional strength of professional nurses
- 2) To propose Buddhist principles and models for enhancing the emotional strength of professional nurses
- 3) To develop a Buddhist model for enhancing the emotional strength of professional nurses

3. Materials and Methods

The materials implemented in this research consist of the following:

Population Group No.1 (Contest Group): 50 Professional nurses

- Emotional assessment form
- questionnaires
- observed by the Researcher

Population Group No.2 (Experimental Group): 18 nurses (Joyful Nursing Classroom)

- Emotional assessment form
- Pre-test and Post-test questionnaires

After reviewing such research tools by experts, the Researcher applied them to two population groups and then used the results tested from those two population groups to analyze for opinions. The facts that emerged, yield theories to design a Buddhist model. After that is the process of creating a Buddhist model. It was proposed to the qualified persons consisting of 3 professional nursing experts and 3 Buddhist experts to give their opinions along with additional interviews for the development of the emotional strengthening model of professional nurses. This is in order to be complete and able to answer research questions, namely principles, and Buddhist models. for the emotional strengthening of professional nurses.

The mixed research method was implemented in this research. The scope of the research is defined in two areas as follows:

1) Scope of Content: Study on the theory of emotional strength, the theory of mental development according to the 4 *Bhāvanās* principles (*kāya-bhāvanā*, *sīla-bhāvanā*, *citta-bhāvanā*, and *paññā-bhāvanā*), study the nature of work, problems in the performance of duties and standards of professional nurses, as well as study the Buddhist principles of emotional strengthening, and Dhamma principles for enhancing mindfulness (*sati*), morality (*sīla*), and meditation (*samādhi*).

2) Scope of Population: After studying the content, therefore, the information is brought into the process of emotional strengthening of professional nurses. defining quality research methods, field research, research design, and defining the population boundaries of the two hospitals according to academic principles including nurses who have worked for more than 3 years (Rosenstein, 2008). To make the research more complete, the Researcher created a research tool for in-depth interviews by interviewing 3 professional nursing specialists, 3 Buddhist experts, and behavioral science specialists. This is to explore different opinions and perspectives such as attitudes, behaviors, communication, tolerance, and desirable characteristics of emotionally strong professional nurses.

The population shown in the research was divided into 2 groups to see similarities or differences.

1) Population Group No.1 has set the criteria for selecting the population groups of 50 professional nurses in total. They are 25 nurses from Samrong Medical Hospital which is a private hospital located in Samut Prakan Province; and 25 nurses from Samut Sakhon Hospital, Samut Sakhon Province. All the nurses are on duty on a daily basis. This is to know the emotional strength of professional nurses. The research tools used were an emotional assessment form, a questionnaire, and observation by the researcher.

2) The Population Group No.2 consisted of 18 professional nurses who voluntarily enrolled in the classroom “Joyful Nursing Classroom” of Samut Sakhon Hospital. In this group, the Researcher has mainly applied the Buddhist principle of the 4 *Bhāvanās* Buddhist principles in the classroom as well.

4. Results

The research studying “Enhancing Emotional Strength of Professional Nurses: Buddhist Principles and Model” aims to examine the emotional strength of professional nurses, propose Buddhist principles and models for enhancing the emotional strength of professional nurses, and develop a Buddhist model for enhancing emotional strength of professional nurses. By applying the research conceptual framework and the data used as research tools, the findings of the data analysis may be presented in 6 sections, respectively, as follows:

- 1) Basic information of the population and the sample of Group No.1 consisting of 50 people.
- 2) The results of the opinion analysis from the assessment of emotional strengthening of professional nurses of the population and the sample of the Group No.1 of 50 people, divided into 2 hospitals: - (1) Samrong Medical Hospital, Samut Prakan Province, and (2) Samut Sakhon Hospital, Samut Sakhon Province.
- 3) Basic information of the population and the sample of Group No.2 of 18 people are professional nurses who voluntarily joined the classroom “Joyful Nursing Classroom” Buddhist principle of the 4 *Bhāvanās*, Samut Sakhon Hospital. The purpose of using tools is to find and develop a Buddhist model for the emotional strengthening of professional nurses according to the 3rd objective.
- 4) Synthesis of opinions and recommendations from in-depth interviews with the experts which is the population and the third group of samples, consisting of 6 professional nursing specialists, Buddhist experts, and social experts. This is to ensure that the principles and the method of the Buddhist model are perfect and can be practical, able to meet the heavy workload of professional nurses, able to solve real-world problems, as well as the nurse's ability to cope with the rapid changes in social conditions appropriately and effectively.
- 5) Develop a model for the emotional strengthening of professional nurses.
- 6) Show an overview of model development in the emotional strengthening of professional nurses.

However, when analyzing the results of the emotional strengthening assessment of professional nurses, the population and the samples of Group No.1 and sample Group No.2. It can be shown in the following table.

Table 1 Ability to Enhance the Emotional Strength of Professional Nurses

Ability to Enhance the Emotional Strength of Professional Nurses	Samrong Medical Hospital		Samut Sakhon Hospital	
	M	S.D.	M	S.D.
1. Emotional stability	2.70	0.26	2.78	0.26
2. Encouragement	2.51	0.30	2.68	0.34
3. Problem management	2.83	0.90	2.84	0.42
Total	2.68	0.48	2.76	0.26

From the table, it was found that in the assessment of emotional strengthening of professional nurses, in the group of professional nurses from Samrong Medical Hospital, there were opinions about the ability to build emotional strength in all three aspects, which were quite true according to the mean score of 2.68 and S.D. at 0.48. And the opinions on each aspect were at the quite a realistic level as follows:

Emotional Stability aspect, the mean value is at 2.70 level, and the S.D. value is at 0.26 level.

Encouragement aspect, the mean value is at 2.51 level, and the S.D. value is at 0.30 level.

Problem Management aspect, the mean value is at 2.83 level, and the S.D. value is at 0.90 level.

In terms of professional nurses from Samut Sakhon Hospital, there were opinions about the ability to build emotional strength in all three aspects, which were quite true according to the mean of 2.76 and S.D. 0.26, and the opinions on each aspect were at the quite a realistic level as follows:

Emotional Stability aspect, the mean value is at 2.78 level, and the S.D. value is at 0.26 level.

Encouragement aspect, the mean value is at 2.68 level, and the S.D. value is at 0.34 level.

Problem Management aspect, the mean value is at 2.84 level, and the S.D. value is at 0.42 level.

In summary, the results of the assessment of emotional strengthening of professional nurses of the sample population of Group No.1 It was found that the professional nurses of Samut Sakhon Hospital had overall assessment results in all three aspects. The professional nurses who were in the sample group had

more emotional strength than the professional nurses of Samrong Medical Hospital. The relevant factors that can be used to support the assessment results are factors of working age of professional nurses at Samut Sakhon Hospital which accounted for 32 percent. In addition, the greater workload factor due to being a government hospital also resulted in high tolerance, which significantly had a positive impact on the emotional reinforcement of professional nurses.

The Researcher describes the Buddhist model: Emotional strengthening of professional nurses as follows.

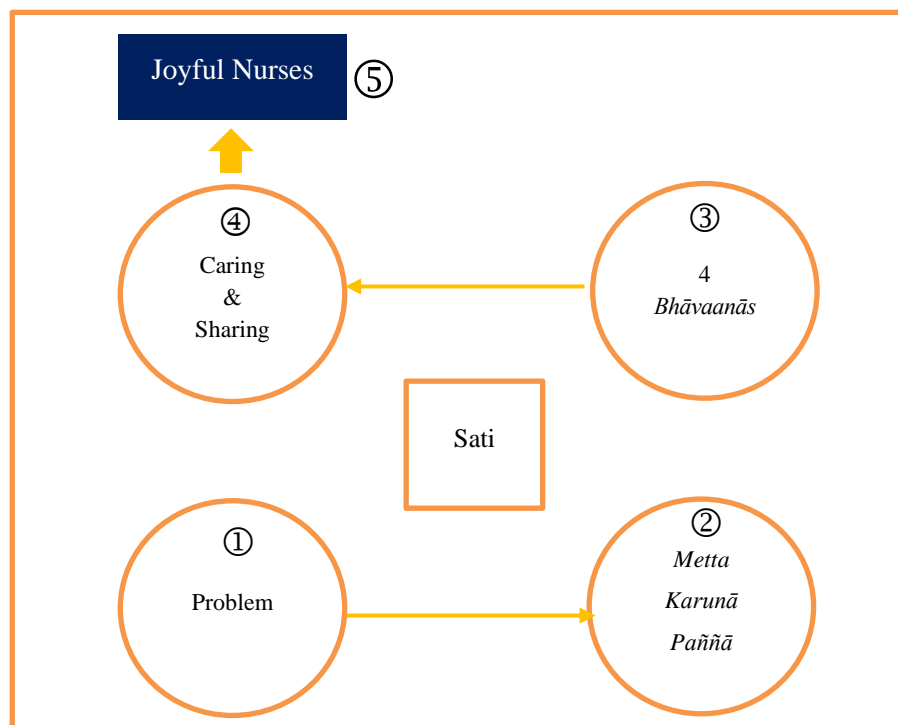


Figure 1 Enhancing Emotional Strength of Professional Nurses: Buddhist Principles and Model

Buddhist Model Development: Emotional Strengthening of Professional Nurses: The professional nursing specialists and Buddhist experts and experts in society each gave their opinions to consider choosing a Buddhist model starting with the problem are to solve problems with the Four Noble Truths, consisting of the Noble Truth of sufferings (*dukkha-ariyasacca*), the Noble Truth of causes of sufferings (*dukkha-samudaya-ariyasacca*), the Noble Truth of the cessation of sufferings (*dukkha-nirodha-ariyasacca*), and the Noble Truth of the path leading to the cessation of sufferings (*dukkha-nirodhagāminī-paṭipadā-ariyasacca*). It is a solution to the problem based on the principle of reasoning according to the guideline, from the arisen problem to the right contextual solution, respectively. When a problem occurs, (1) the first thing to do is to intellectually determine the real problem, (2) and then to determine the cause of the problem to solve the problem to the point sustainably and permanently, (3) knowing the state of the extinguishing of the problem, and, (4) implementing the right approach of solving the problem as skillfully means.

In solving this problem according to the Four Noble Truths, it is necessary to do it in parallel with the use of the threefold Dhamma named: - Loving-kindness (*metta*), compassion (*karunā*), which are associated with wisdom (*paññā*). This is a dhamma series that is a special qualification for medical personnel, especially nurses. Moreover, the Buddhist 4 *Bhāvanās*, *kāya-bhāvanā* for instance, can be used as a ground doctrine for holistic development from physiological to wisdom level of development, including the Care & Share activities, which lead to a systematic process of strengthening professional nurses. The most important thing that nurses need to carry with them at all times is mindfulness (*sati*), which is placed in the center of the model. It shows its importance as the center of mindfulness of the physical body, behaviors, mental

activities, and intelligence of professional nurses. In conclusion, this Model is to support professional standard behavioral characteristics such as smiling nurses, attentive to service, and sweet talks.

5. Discussion

A Joyful Nursing Classroom can create a Buddhist model to enhance the emotional strength of professional nurses appropriately. It can help reduce emotional vulnerability and effectively strengthen the emotion of nurses as in the Buddhist Model proposed.

In addition, it was found that the Buddhist model for emotional strengthening supports professional nurses to acquire principles and methods of emotional strengthening in 4 ways: - 1) looking and appreciating the value of oneself, 2) developing emotional strengths, enhancing positive thinking, and increasing mental immunity, 3) increasing mental strength by continually practicing the Fourfold Development, and 4) Caring and sharing and awareness of letting go.

The Buddhist Model is a tool and key to strengthening professional nurses. The result of the nursing society is a change in a better direction in terms of behavior, communication, reasoning, and emotional intelligence ability while performing duties amid workloads and problems surrounded. The outcomes encourage professional nurses to be happy in the performance of their duties, have a good personality, smile, and eloquently speak which is a good result for patients and their relatives. Therefore, the Buddhist Model for emotional reinforcement of professional nurses will be principles and methods that are scientific processes to help promote the development of human integrity and the ability to connect the nursing society. It is a culture of happiness in performing duties.

6. Conclusion

In conclusion to the findings of this study, it is shown: Firstly, emotional strength in Buddhism uses the principles and methods of equilibrium, namely: the middle path in a nursing way. Understanding one's own emotions and feelings are magical energy to perform nursing techniques according to professional nursing standards. Secondly, Buddhist principles and model for emotional strengthening of professional nurses bring the dhamma principle on the Fourfold Development and the Threefold Training to the design of the classroom to apply to field area data. The results of the statistical data and interviews of the randomly asked class participants found that the Buddhist model for emotional strengthening of professional nurses is appropriate and can help reduce emotional weakness and can significantly strengthen emotions. Thirdly, the fully developed Model can be used as a tool for the emotional strengthening of professional nurses with the same principles and standard methods in the nursing profession. It helps in driving the mind that affects the expression to show good behavior professional nurse with dhamma as the main pillar to the Model.

However, these three suggestions have been made: Firstly, the suggestion to the Nursing Council of Thailand: present a Buddhist model for the emotional strengthening of professional nurses as a tool to heal the mind of professional nurses. In addition, nurses also have the opportunity to create merit in Buddhist activities that have a continuation of dharma practice in order to have unity between nursing and Buddhism for the utmost benefit of the public health system. Secondly, the suggestion to personnel development participants: Regarding the competency of registered nurses, the term "good behavior" refers to the creation of an identity that expresses the personality, confidence, faith, abilities, attitudes, and charm of professional nurses' service. These will help enhance the efficiency of professional nurses to be called a career of merit. This has stimulated a large number of social and vocational needs. Thirdly, suggestion on personnel development policy: The learning process culture in integrating Buddhism with modern sciences should be well established. The philosophy of Mahachulalongkornrajavidyalaya University is "Providing Buddhist Studies, integration with modern science, for mental and social development," that is to say, science teaches people to be smart, while religion trains people to be good. But if a person has both science and religion, there will be cooperation in the management of education. Society will eventually have both smart people and good people." In the end, for the suggestion for further research in the future, the researcher believes that this issue should be further explored in detail. "Buddhist Model to Increase the Efficiency of Personnel in Public Health System" and "Buddhist Model to Reduce Causes of Ruin (*Apāyamukha*) of Personnel in the Organization."

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Willingness to Pay for Road Safety Improvement of Foreign Visitors in Thailand

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Abstract

The objective of this research was to estimate the willingness to pay for insurance fees of foreign tourists who visited Thailand for road safety and to reduce the risk of road accidents occurring among visitors. The survey of 405 foreign tourists was conducted by using Contingent Valuation (CV) to calculate the value of Willingness to Pay (WTP) for travel fees of foreign tourists visiting Thailand. The study showed that 65% of the foreign tourists travel to Thailand by themselves without a tour guide or with their families and relatives while the other 35% visited the country by hiring travel agencies. Most of the foreign tourists, approximately 90%, had bought travel insurance before coming to Thailand with concerns about road safety. The results revealed that 47% of foreign tourists agreed to pay an insurance fee. On the other hand, 53% of foreign tourists who did not want to pay the insurance fee believed that the Thai government is inefficient or incompetent in improving road safety. Moreover, they were more certain of their home country's travel insurance plan and coverage options. For the foreign tourists who were willing to pay an insurance fee for road safety development in Thailand, they thought of taking responsibility and being accountable to themselves. The willingness to pay value was estimated with the average amount of 331.28 Baht per person for 30 days. The range of 300-350 Baht, was accepted by involved government and private agencies to reduce the risk of Thailand road traffic accidents for foreign visitors.

Keywords: *willingness to pay, Road Safety, Foreign Visitors*

1. Introduction

The tourism industry is a major economic contributor to Thailand which helped generate revenue of over 2,008,571.20 million Baht. Each year, more than 38,277,300 foreign tourists from all over the world come to Thailand, with a growth rate of 7.54% per year. Besides, foreign tourists visiting different regions of the country contribute to the distribution of income and greatly reduce the economic disparity between the regions according to Visa on Arrival (VOA) for foreigners of 20 countries and 1 economic zone (Taiwan) fee waiver measure, (Division of Tourism and Sports Economy Office of the Permanent Secretary, 2019). Meanwhile, the number of road accident deaths in Thailand is reported by the World Health Organization (WHO) to be among the highest in the world. The Global Status Report on Road Safety in 2018 cited Thailand's number of road accidents as the ninth highest in the world, although it dropped from the second in 2015 as the country with the highest risk of road accidents, the death rate from accidents is still very high, especially on motorcycles, where Thailand remains the highest fatality rate in the world. Thailand's economic losses from accidents and deaths are as high as 500-billion- Baht, accounting for 3% of GDP per year. Based on the statistics of injury/death among foreign tourists traveling to Thailand, it was found that from 2016 onwards until the first 8 months of 2019, there were 2,522 foreign tourists injured and dead in Thailand, most of which 54.60% had road-traffic accidents, followed by non-passenger water accidents, such as water activities, numbering 499 cases, accounting for 19.79, water accidents by water passengers and transportation, numbering 269 cases, accounting for 10.67%, which is the number and proportion similar to non-passenger land accidents, numbering 261 cases, accounting for 4.60%. The top 10 causes of accidents included motorcycles, cars, tour buses, swimming in natural waters, non-communicable diseases/congenital diseases,

public vans, other land accidents, speed boats, and snorkeling. The provinces with the highest number of injured and dead foreign tourists were the main tourist provinces of Thailand, including Phuket, Surat Thani, Phang Nga, Krabi, Chiang Mai, Kanchanaburi, Phra Nakhon Si Ayutthaya, and Chonburi, respectively (Bureau of Standards and Supervision of Tourist Safety, 2019) as the data in Table 1.

Table 1 Types of Accidents and the Number of Injured-Death Tourists

Types of Accidents	Number of Injured-Death Tourists (Case)				Total (Case)	Ratio (%)
	Year 2016	Year 2017	Year 2018	Year 2019*		
Land - Traffic	323	451	376	227	1,377	54.60
Water - Non-passenger or water activities	102	163	133	101	499	19.79
Water - Passenger or transportation	102	48	106	13	269	10.67
Land – Non-passenger or land activities	56	87	69	49	261	10.35
Crime	40	45	22	9	116	4.60
Total	623	794	706	399	2,522	100.00

* Period from January - August 2019

Source: Bureau of Standards and Supervision of Tourist Safety, 2019

As the impact of road accidents affects not only the victims but also their families and the nation's society, it becomes a social burden for the death of one person and has a bad effect on the other person involved. Thailand Development Research Institute (TDRI) (Ocharoen, 2017) calculated the cost of fatalities and serious injuries in traffic accidents by assessing the willingness to pay for road safety improvement. The study found that death cases were worth approximately 10 million Baht per case while the serious injury cases were worth about 3 million Baht per person. Based on that information, TDRI further reported that during 2011-2013 the average annual accident cost was 545,435 million Baht, which is close to the WHO's estimation, and in 2017, In 2017, the total loss from road traffic accidents in Thailand was 121 million Baht or 0.8% of GDP. All are classified as death cases worth about 45 million Baht, serious injuries worth about 67.5 million Baht, disability cases worth about 7 million Baht, and minor injuries worth about 1.5 million Baht (Chantith, Permponwiwat, & Hamaide, 2021). Besides, the impact of road accidents affects not only the victims but also their families and the nation's society (Tuatthep, & Tanaboriboon, 2005; Okoroji, Nwokedi, & Chinedum, 2014; Gorea, 2016; Haddak, Lefèvre, & Havet, 2016; Ei, 2017). A study described the financial burden of life and property on the sector and those involved in road accidents as being accident victims, their families, employers, insurance companies, and the government. Such costs arise as an external effect wherein the death of one person will negatively affect the other person involved, such as premature death, or the death of the head of the family in a road accident. Life/accident insurance purchase is often a common solution of international travelers for potential risks and burdens reduction. Meanwhile, policy management on such risk reduction in tourist countries is also necessary.

From the above, the researcher has studied the value of willingness to pay insurance fees of foreign tourists visiting Thailand by using the Contingent Valuation Method (CVM) to assess the Willingness to Pay (WTP). Willingness to Pay means the satisfaction or willingness of a consumer to purchase a particular product or service at various price levels for a product or service. The extent to which consumers are satisfied or willing to pay for that product or service depends on their valuation and realization of the value of that product or service. It relies on the creation of contingent valuation for the production of related goods or services in order to directly inquire about the willingness to pay for the goods and services from the consumer (Preedasak, 2013). The Contingent Valuation Method (CVM) to assess the Willingness to Pay (WTP) can be applied to assess the value of non-marketable goods or the value of the environment as well as the value of willingness to pay. It is commonly used to assess the severity, cost, and factors affecting road safety (Chung, Kyle, Petrick, & Absher, 2011; Kamolcharuphisuth, 2011; Ainy, Soori, Ganjali, Le, & Baghfalaki, 2014;

Haddak et al., 2016; Mon, Jomnonkwao, Khampirat, Satiennam, & Ratanavaraha, 2018; Puttawong, & Chaturabong, 2020). This study aimed to assess the willingness to pay insurance fees of foreign tourists in Thailand for road safety improvement, coverage benefits receipt as a guarantee during their travels in Thailand and for fund allocation on the tourism infrastructure development, especially in regards to tourist safety.

2. Objectives

To calculate the appropriate willingness to pay for the foreign tourist's insurance fee when entering Thailand for reducing the risk of road traffic accidents.

3. Materials and Methods

This research aimed to determine the appropriate value of willingness to pay to reduce road accidental risks among foreign tourists with a focus on foreign tourists visiting Thailand. Questionnaires were used to ask foreign tourists according to the Contingent Valuation (CV) principle to find the Willingness to Pay (WTP) value for foreign tourists who purchase travel insurance to reduce their risks while traveling in Thailand only.

3.1 Population and Sample

The population used in this study was foreign tourists visiting Thailand. In 2017, there were a total of 35,381,210 foreign tourists (Economics Tourism and Sports Division, 2019) in Thailand. The researchers determined the sample groups and sample sizes used in the study according to the Taro Yamane method (Yamane, 1973) as we know the size of the population used in the study, that is, the number of foreign tourists in Thailand was 35,381,210 in 2017. In this study, the confidence level was 95% and the error ratio was 0.05. Substituting the formula, according to Taro Yamane's method, the sample size used in this study was 394.67 samples, the sample size was adjusted to an integer of 400 samples, and purposive sampling was performed. The data collection sites for this research included international airports, tourist attractions, and accommodations in Bangkok where foreign tourists are staying or visiting. The sample groups of foreign tourists visiting Thailand used in the data collection for this research were classified into 4 groups: 1) 100 samples of Chinese foreign tourists, 2) 100 samples of European-American foreign tourists, 3) 100 samples of Korean-Japanese-Indian foreign tourists, and 4) 100 samples of foreign tourists from ASEAN countries.

3.2 Research Tool

This study used both open-ended and closed-ended questionnaires to determine the value of economic losses according to the Contingent Valuation Method (CVM) to assess the Willingness to Pay (WTP) value for insurance purchases to reduce travel risks of 400 samples of foreign tourists in Thailand. The coverage type sample of the compulsory travel insurance policy was a standard policy. There were details of coverage in Table 2 for sample group questionnaires. The quality of the questionnaire's research instruments (quantitative research) was examined in accordance with the process of verifying the content accuracy of the questionnaire by experts or masters in accordance with the ethics request process for research in humans.

Table 2 Coverage type sample of the compulsory travel insurance standard policy (Standard Policy)

Coverage	Standard Coverage Amount (Standard)*
1. Personal accident insurance	1,000,000 Baht
2. Medical expenses from accidents and health	1,000,000 Baht
3. Emergency evacuation and repatriation of the body	1,000,000 Baht
4. Travel insurance premiums	200 Baht /30 days/person

* The coverage period is 30 days of each trip.

3.3 Data Analysis

Data obtained from the questionnaire which consists of general information about foreign tourists, vehicles used for domestic travel, benefits, and insurance fees, including data on the economic loss value and calculating the willingness to pay to reduce the risk of road accidents were analyzed by descriptive statistics, Chi-square test) and Sample means comparison (F-test, t-test) as well as contingent valuation method (CVM). Data were tested by a computer program to select the most appropriate cumulative probability distribution models to calculate the willingness to pay for insurance fees of tourists visiting Thailand from all three models including 1) Log-normal 2) Weibull and 3) Log-logistics. The cumulative probability distribution model with the highest Log-likelihood value was determined for insurance fees for foreign tourists, and the multiple regression analysis was used to determine the appropriate value of willingness to pay for foreign tourist insurance fees to meet research objectives.

4. Results

The data collected from the questionnaire can be analyzed as follows:

4.1 Data analysis from questionnaires

From Table 3, it was found that the majority of foreign tourists visiting Thailand were male accounted for 52.8%, aged between 30 to 49 accounted for 62.3%, having a bachelor's degree or equivalent accounted for 68.3%, personal income level below 60,000 US dollars per family per year accounted for 51.1%, and Chinese tourists were the most nationality of foreign tourists visiting Thailand accounted for 31.3%, from all 405 samples.

Table 3 General information of foreign tourists

Topic	Percentage of Sample Distribution	
Gender	Male	52.8
	Female	47.2
	Total	100.0
Age group	Under 30 years	23.9
	30 to 49 years	62.3
	50 years and above	13.7
	Total	100.0
Education level	Secondary school or lower	24.6
	Bachelor's degree or equivalent	68.3
	Master's degree and above	7.1
	Total	100.0
Personal income level	Less than 60,000 USD per year	51.1
	60,001 – 100,000 USD per year	33.9
	100,001 USD per year and more	15.0
	Total	100.0
Tourist nationality	ASEAN	24.8
	Chinese	31.3
	Japanese, Korean, Indian	13.3
	American, European, Australian	30.8
	Total	100.0

Note: Number of sample tourists 405 persons

Table 4 shows foreign tourists visiting Thailand by personal income level. It was found that American, European, and Australian foreign tourists had the most proportion of people with a personal income level below 60,000 US dollars per family per year accounting for 67.8%, which was the highest proportion when compared with the foreign tourists of other nationalities who visited Thailand in the same income group. It was revealed that American, European, and Australian foreign tourists were not those with

very high personal income levels or the wealthy. On the contrary, the most proportion of people with a personal income level of more than 100,001 US dollars per family per year accounted for 30.6%, which was the highest proportion when compared to foreign tourists of other nationalities visiting Thailand in the same income group. This revealed that Chinese tourists are potential travelers to spend money while traveling in Thailand or wealthy tourists. It was also found that 55.1% of ASEAN tourists were those with income levels between 60,001-100,000 US dollars per family per year

Table 4 General information of foreign tourists by nationality

Table 4 General information of foreign tourists by nationality				
Tourist Nationality	Percentage of Sample Distribution			Total
	Personal income level (USD per family per year)			
	Less than 60,000 USD	60,001 – 100,000 USD	100,001 USD and above	
ASEAN	30.6	55.1	14.3	100.0
Chinese	48.4	21.0	30.6	100.0
Japanese, Korean, Indian	52.8	35.8	11.3	100.0
American, European, Australian	67.8	30.6	1.7	100.0

Note: Number of Tourists 405 person

Table 5 Type of travel in Thailand

Type of Travel	Qty.	Percentage of Distribution
Travel with a travel agency	142	35.1
Travel on oneself or with family	263	64.9
Total	405	100.0

Table 5 shows the type of travel in Thailand from 405 foreign tourist samples. It was found that 64.9% of them travel to Thailand on their own or with friends or with family, while 35.1 of them traveled to Thailand with travel agencies. When classified by nationality of foreign tourists visiting Thailand, three-quarters of Chinese foreign tourists visiting Thailand used travel agencies. Only about 22% of Chinese foreign tourists visited Thailand on their own or with friends or family. Chinese foreign tourists were the only tourists among the four groups of tourists in the study who used travel agencies for travel to Thailand. While foreign tourists of other nationalities, i.e., ASEAN, American, European, Japanese, Korean, and Indian, most of them travel to Thailand on their own or with friends or family but a relatively small proportion use travel agencies for travel to Thailand. In particular, American, European, and Australian foreign tourists account for the highest percentage of foreign tourists visiting Thailand on their own or with friends or family, with approximately 90%. The proportions of Japanese, Korean, and Indian foreign tourists and ASEAN foreign tourists visiting Thailand on their own or with friends or family were similar in both groups, at approximately 79% as shown in Table 6.

Table 6 Type of travel in Thailand classified by nationality

Tourist Nationality	Percentage of Distribution	
	Type of travel in Thailand	
	Travel with a travel agency	Travel on oneself or with family
ASEAN	21.2	78.8
Chinese	78.4	21.6
Japanese, Korean, Indian	20.7	79.3
American, European, Australian	8.9	91.1

Table 7 shows that Chinese tourists having insurance during travel in Thailand had the highest proportion accounting for 98%. Due to the fact that most Chinese foreign tourists come to Thailand through

travel agencies, which are required by Thai law to have insurance before entering Thailand. However, most of the other foreign tourists from Asian countries, America, European countries, Australia, Japan, Korea, and India did already have at least one insurance before traveling to Thailand. Surprisingly, there were nearly 19% of western tourists from America and Europe including Australia indicated they were having no insurance at all traveling to Thailand.

Table 7 Foreign tourists having insurance during travel in Thailand classified by nationality

Tourist Nationality	Percentage of Distribution	
	Having insurance during travel in Thailand	
	Having at least one insurance	Having no insurance
ASEAN	93.9	6.1
Chinese	98.4	1.6
Japanese, Korean, Indian	81.0	19.0
American, European, Australian	81.3	18.7

Table 8 Willingness to Pay Tourist Insurance Fees

Tourist's Willingness to Pay	Number of Tourists	Percentage of Distribution
Willingness to Pay	187	47.0
Unwillingness to Pay	211	53.0
Total	398	100.0

Table 8 shows that 47% of foreign tourists were willing to pay insurance fees while 53% of foreign tourists visiting Thailand were unwilling to pay insurance fees.

Table 9 Reasons for unwilling to pay insurance fees (Can answer more than 1 answer)

Reasons for unwilling to pay	Number of Answers	Percentage of Distribution
Not the duty of the government in this regard.	83	23.65
The government should formulate policies and allow the private sector to act.	69	19.66
The government is not effective in the operation.	101	28.77
Have insurance that offers better benefits than the government offers.	98	27.92
Total	351	100.0

Table 9 reveals that when considering the top reasons foreign tourists were unwilling to pay insurance fees to improve road safety, about 28.77% of foreign tourists who answered the question argued that government is not effective in charging insurance fees to improve road safety, followed by about 27.92% of them argued that they had some type of insurance with better benefits than the government offered, which is consistent with the above information that most foreign tourists had some type of insurance while traveling in Thailand. Consequently, foreign tourists were unwilling to pay insurance fees with less or lower benefits than what they already had and it was considered a redundant burden. The third and fourth reasons why the foreign tourists were unwilling to pay insurance fees argued that the insurance charge is not the duty of the government but the private sector, the government should be just a policymaker and engage in policy compliance monitoring. The government should not come down and take action on their own because they may not be efficient in providing services because they have to serve a large number of foreign tourists each year.

Table 10 shows the reasons why foreign tourists were willing to pay insurance fees to improve road safety. The most important reason why foreign tourists were willing to pay insurance fees during their travel in Thailand was that they saw it as the responsibility of each traveler to be responsible for themselves by paying the insurance fees which accounted for approximately 27.52%. The second reason was to diversify

the risks of traveling in Thailand, the top country in the world in road accidents, therefore tourists should have insurance against the risk of road accidents and be willing to pay the insurance fees offered by the government which accounted for approximately 24.37%. The third reason was to enhance the insurance benefits they already have which accounted for approximately 20.81%, which was consistent with the above information that most foreign tourists had some type of insurance while traveling in Thailand. Therefore, if there is an additional charge for insurance from the government, it will enhance the benefits or increase the coverage of the existing insurance.

Table 10 Reasons for willing to pay insurance fees (Can answer more than 1 answer)

Reasons for unwilling to pay	Number of Answers	Percentage of Distribution
Each traveler should show their own responsibility.	123	27.52
To diversify the risks of traveling in Thailand	109	24.37
It is compulsory insurance by the government.	66	14.77
Do not have any insurance while traveling in Thailand.	56	12.53
To enhance the insurance benefits they already have	93	20.81
Total	447	100.0

Besides, about 15% of foreign tourists visiting Thailand argued that they were willing to pay the insurance fee as a compulsory measure from the government of Thailand. Therefore, when the Thai government enacts laws, regulations, or measures to charge insurance fees, they, as foreign tourists, need to be willing to pay accordingly. However, the study also found that foreign tourists visiting Thailand without any insurance were willing to pay the insurance fee for improving road safety so that they or their families were insured and protected if they or their friends or families got into a road accident while traveling in Thailand. Foreign tourists who made the aforementioned reasons accounted for about 12.53% of the total number of responses made by foreign tourists.

4.2 Value Analysis of Willingness to Pay for Insurance Fee

To analyze the value of willingness to pay for insurance fees of foreign tourists visiting Thailand to improve road safety, the questionnaires collected from the sample group with 187 foreign tourists willing to pay were analyzed with three cumulative probability distribution models including (1) Log-normal (2) Weibull and (3) Log-logistics by considering the appropriate cumulative probability distribution model from the log-likelihood with the highest value as shown in Table 11.

Table 11 Cumulative Probability Distribution of Foreign Tourists' Willingness to Pay for Insurance Fee

Cumulative Probability Distribution Model	Log-Likelihood Value	
	without independent variable	with independent variable
Log-normal	-256.452	-233.671
Weibull	-267.031	-245.907
Log-logistics	-260.667	-236.689

Table 11 shows the results of a computer program test to select the most appropriate cumulative probability distribution to calculate the willingness to pay insurance fees of foreign tourists in Thailand from a total of 3 models including (1) Log-normal (2) Weibull and (3) Log-logistics, based on the cumulative probability distribution model with the lowest Log-likelihood value. The results revealed that, whether without an independent variable or with an independent variable, the log-normal cumulative probability distribution model had the highest Log-likelihood value. Without an independent variable, the Log-likelihood value was -256.452; and with the independent variable, the Log-likelihood value was -233.671. In both cases (without an independent variable and with an independent variable) the log-normal cumulative probability distribution model had the highest Log-likelihood value and more than the Weibull and the log-logistics model whether without an independent variable or with an independent variable. Therefore, to calculate the

willingness to pay insurance fees of foreign tourists in Thailand hereafter, the log-normal cumulative probability distribution model was used.

Table 12 Value of Willingness to Pay for Insurance Fee

Statistical Value	Calculation Result
Intercept (μ)	5.6699
Scalar	0.5159
The average value of willingness to pay	331.28
The average value of willingness to pay at a 95% confidence level	303.23-359.33

Table 12 shows that foreign tourists in Thailand had an average willingness to pay insurance fees of 331.28 Baht. When calculating the value of willingness to pay insurance fees by ranges to represent the upper and lower bounds of foreign tourists' willingness to pay, with the determined 95% confidence level, the study found that foreign tourists visiting Thailand had an average willingness to pay insurance fees between 303.23 Baht and 359.33 Baht.

5. Conclusion

From a survey of 405 foreign tourists visiting Thailand during the year 2019, the study characterized tourists into 4 groups based on nationalities and regions: 1) Chinese tourists, 2) European-American tourists, 3) Korean-Japanese-Indian tourists, and 4) ASEAN tourists. The study showed that more than 80% of the foreign travelers had bought insurance to ensure their safety before entering Thailand, with the highest proportion of 98% of the Chinese visitors confirmed at least holding one type of insurance. The results of the analysis on the willingness to pay for road safety improvement of foreign visitors found that the visitors were willing to pay for insurance premiums. By calculating the willingness to pay for insurance premium in the form of Log-normal Probability Distribution with or without an independent variable, it was found that the average value of willingness to pay for insurance premium was 331.28 Baht. This amount had been confirmed by the experts from tourism and insurance businesses that the appropriate range would be 300 - 350 Baht per 30 days per person. Therefore, this obtained value of willingness to pay could be applied to the decision-making level as the guidelines for designing insurance policies and premiums in order to reduce the risks of the loss of life and assets caused by road accidents and enable foreign tourists to gain benefits and coverage as the security while traveling in Thailand.

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Better Campus Dormitory Living Experiences: The Case of King Mongkut's University of Technology Thonburi, Bangkhuntien Campus

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Abstract

This study focuses on the 'transitional experience' from Kenyon concept (1999) confronting students who leave home to live in the new environment of a university dormitory. Observing the university dormitory from the perspective of an interior architect, this study aims to understand what constitutes comfortable living for students. The objectives of this research are to establish applicable strategies for a campus dormitory design that responds to the psychological and physical comfort of undergraduate students and encourage universities to rethink dormitory design. The first part of the study examines the theories relating to psychological and physical comfort, and the role of dormitories within campus environments. The second part of the research focuses on dormitory case studies and investigates the current conditions in a university dormitory. Finally, the research topic is applied to a lab-based learning project for second-year students of Interior Architecture. As a result, this study identifies the appropriate design criteria for improving the dormitory of King Mongkut's University of Technology Thonburi, Bangkhuntien Campus, which, if adopted by the university, can be used to provide a better experience for students.

Keywords: *Dormitory, Physical comfort, Psychological comfort, Shared space, Temporary dwelling*

1. Introduction

A dormitory for undergraduate students is an ambiguous space, uniquely providing them with half temporary and half permanent accommodation, and they may decide to spend at least four years residing there. A dormitory is not only a place to sleep but can be perceived as a temporary home for students over a certain period of time during the formation of their adulthood and transition to a professional career. This research considers the dormitory as being equivalent to a home – a simple space that triggers all kinds of complex sentiments – fondness, intimacy, warmth, attachment, and comfort, affecting psychological and physical states of a person. Examination of the university dormitory raises the following questions: *What if a home happens to be temporary? What if a home happens to be small? What if a home happens to have unfamiliar persons living together?* Living in a new environment represents a significant life change, and this research focuses on the process of leaving the family home (a dependent dwelling) and moving to a university dormitory (an independent dwelling). Many freshmen are confronted with this 'transitional experience' (Kenyon, 1999) when moving into a university dormitory. The research questions form the basis of an investigation into how students inhabit the dormitory under sharing and temporality conditions since space is linked to social behaviour and human geography (Temple, 2014). This research tackles the psychological and physical comfort materialising in the dormitories of undergraduate students.

Firstly, this research examines the theories relating to the physical and psychological comfort of spatial design and the role of dormitory within the campus environment. Secondly, case studies are explored to expand the dormitory concept within the universal campus environment using the existing dormitory at King Mongkut's Technology Thonburi (KMUTT), Bangkhuntien Campus. Lastly, this research is conducted in collaboration with a study by second-year Interior Architecture students on a lab-based design studio under the theme '*co-living space*' to seek creative ideas and design solutions from the actual users of the KMUTT's Bangkhuntien Campus dormitory. The comfort situation inside the dormitory is measured on both the macro and micro scale, influenced in many ways by the '*Ecology of Individual Students*' (Figure 1) (Renn, & Arnold, 2003).

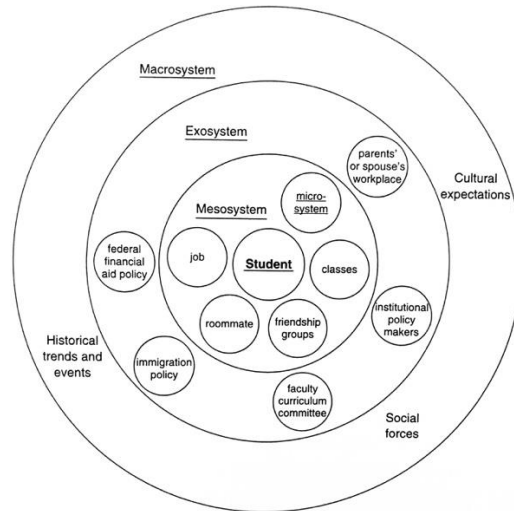


Figure 1 Diagram on the ‘*Ecology of Individual Students*’ shows student development in the university environment ranging from the immediate (microsystem) to most distal (macrosystem) context (Source: Renn and Arnold, 2003)

2. Objectives

The objectives of this research are (1) To establish applicable strategies for a campus dormitory design that respond to psychological and physical comfort, and (2) To encourage the university to rethink dormitory design to provide a better living environment in the contemporary context.

3. Material and Methods

The research framework diagram (Figure 2) presents an overview of this study, starting with comfort situations in the campus dormitory and branching off into three main divisions: 1) Research Subject, 2) Literature Review, Case Studies, Lab-Based Learning, and 3) Conclusion and Recommended Design Strategy.

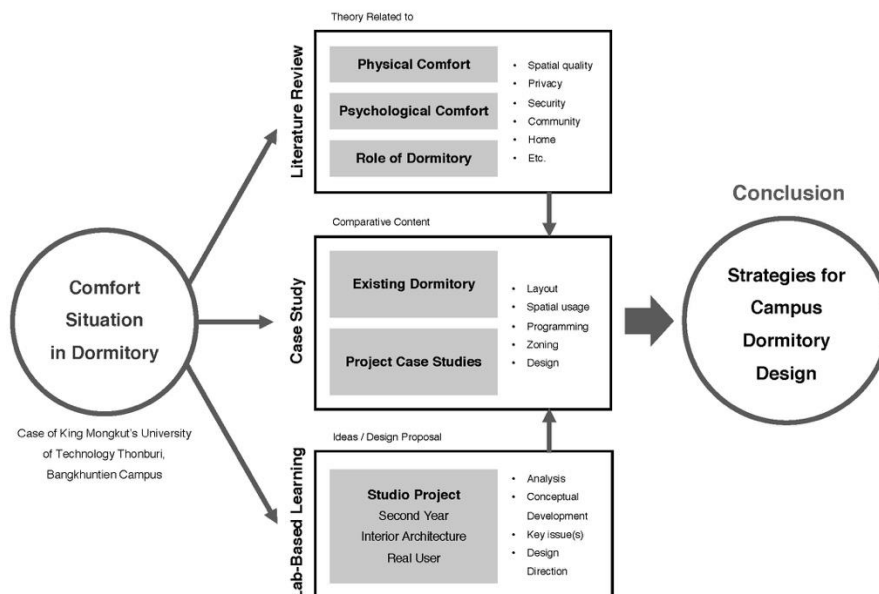


Figure 2 Research framework on Comfort Situations in the dormitory of undergraduate students: The Case of King Mongkut's University of Technology Thonburi, Bangkhuntien Campus (Source: Lumthaweepaisal, 2021)

In the literature review, the studies and theories relating to physical and psychological comfort are explored, including the role of dormitory within campus environments. The case study presented in the following section also takes into account international research projects on dormitories and existing situations (20 studied units) for architectural comparison of the *layout, spatial usage, programming, and zoning*. Lab-based learning on the topic of this research is part of the design brief for second-year Interior Architecture students participating in INA242 Interior Architectural Design II at the School of Architecture and Design, KMUTT. This research consists of insightful analysis and various interesting deliverable designs from actual users. The final section provides a conclusion of the outcomes and applicable strategies for campus dormitory design.

3.1 Literature Review

3.1.1 Related theory on comfort in the spatial design context

Giving character to the space is one of many ways of constructing comfort. Tomas Maldonado (1991) deliberates the meaning of comfort in his essay *'The Idea of Comfort'* as a certain quality of life which comes about in the modern age when home, privacy and comfort are synchronised. He refers to the idea of livability, meaning the services that a particular ambient reality can provide in terms of convenience, ease or habitability. According to Maldonado (1991), comfort is a modern idea. It evokes ease, well-being, cosiness, relaxation, pleasure, and contentment. In this research, comfort not only refers to things contributing to physical ease and well-being – such as smell, noise, light, and temperature, but also the psychological aspects of space influencing the spatial experience of individuals (Miller, 2012).

Space and Behaviour

Space influences the physical and psychological behaviour of humans. Human behaviour in a built environment is influenced by spatial quality. Sally Augustin (2009), an environmental psychologist, studied place science and how psychology can be applied to develop spaces that enrich human experience. The idea of place influencing the user's behaviour is directly linked with the topic under study. Space design is a broad body of knowledge, and without specific objectives, one cannot create a functional space. At the same time, space design should not only be practical but also perform as a *'good space'*.

How do we define a 'good space'? Good is an adjective for explaining that something has the required qualities for giving pleasure, enjoyment, or satisfaction. Augustin (2009) debates that a well-designed space is not intended to serve all human objectives but to ensure a few objectives are very well satisfied. It can be said that a *'good space'* is of above-average quality or standard. She outlines the criteria for a well-designed space into five keywords: complying, communicating, comforting, challenging, and continuing. All of these are spatial attributes, interrelated and manifested to different degrees in certain places – home, school, mall, workplace, etc.

This research focuses on two keywords: communicating and comforting, in the setting of a home and learning environment, since they are directly associated with dormitories for undergraduate students. Communicating refers to the management of territories where individuals can demarcate their own areas and socialise with others on their own terms.

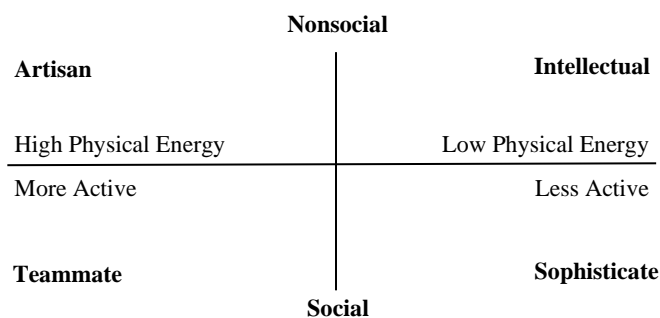


Figure 3 Quadrant living model (Source: Augustin, 2009)

Comforting refers to the control of environments by regulating personal spaces, developing territories, and preventing people from intruding on each other's privacy (Augustine, 2009). These two keywords are used as a guideline for the survey questionnaire on existing dormitory conditions. According to Augustin (2009), no one space is right for all people at all times, and she therefore applies the 'quadrant living model' (Figure 3) to explain how people respond to spaces differently at a particular moment. In the 'quadrant living model', there are areas for more active and less active activities (from left to right) and two situations for the number of people involved in an activity – Nonsocial (alone) and Social (with other people) defined by four characters: Artisan, Intellectual, Teammate, and Sophisticate.

Territory and Encounter Management

To understand the degree of comfort and communication through spatial design, the relationship must be portrayed between personal space and the control of privacy or territory. At university, the interactions between people and the material world are more significant than usual. Students who dwell in the dormitory cannot simply spend time on activities alone in their own room; they need to interact with colleagues and friends in other common spaces. Space therefore becomes a medium for managing the encounters. The complex interaction between space and people leads to better educational outcomes (Temple, 2014).

Instead of providing a specific space for a certain program or activity, the dormitory should provide an environment for adapting to various activity types (Augustin, 2009). Space should also allow for different degrees of encounter to occur because it has a social dimension beyond its apparent functionality (Temple, 2014). The fluctuation of territory is significant since it could shape the way in which students react to the space. Thus, space can be used by students with different characters at various times of the day according to the 'quadrant living model' (Figure 3).

Psychological Comfort in Space

Happiness is one psychological aspect that governs an individual's spatial experiences. The book entitled *'Building Happiness: Architecture to Make You Smile'* (Wernick, 2008) discusses happiness in the context of a built environment. There are some interesting takes on psychological comfort. Richard Roger, an architect, discusses how architecture facilitates happiness with Jane Wernick and Ed Blake: *'Two things that are central to my concept of happiness are culture and community. As an architect, I would also say that on the opposite side to happiness lie (i.e., unhappiness) dereliction, alienation, and brutality'* (Wernick, 2008). This quotation demonstrates the positive and negative side of the sociocultural components influencing how an individual identifies their spatial experience. Creating culture and a sense of community are part of the process of designing a *good space* for enhancing psychological comfort. This also reflects Augustin's criteria of desirable spaces – comforting and communicating, as previously discussed. Such spatial attributes explain why it is important to study user behaviour in existing university dormitory units and other related international case studies.

'All experience implies the acts of recollecting, remembering, and comparing. An embodied memory has an essential role as the basis of remembering a space or place. Home and domicile are integrated with our self-identity; they become part of our own body and being.' (Pallasmaa, 2007)

Juhani Pallasmaa's essay entitled *'Architecture of the Seven Senses'* from the book *'Question of Perception: Phenomenology of Architecture'* (Holl, Pallasmaa, and Pérez Gómez, 2007) supports the view that space is connected to one's memories and sensory experiences. To feel comfortable, one should be familiar with a place. The challenge is how one can be acquainted and accept the existing conditions of the dormitory.

Physical Comfort and Environmental Conditions

Environmental conditions are related to physical comfort, like cause-and-effect. The design of a space affects an individual's physical comfort. Max Fordham, a building services engineer, discusses how humans experience their surroundings through the senses in the book entitled *'Building Happiness:*

Architecture to Make You Smile’ (Wernick, 2008). Four key environmental conditions influence the level of comfort perceived by human sensory experiences: smell, noise, light, and temperature.

Comfort cannot merely be defined as one stereotype space but involves social, cultural, and spatial dimensions. The dormitory is central to a student’s university life. Apart from being comfortable, the dormitory should be treated as both a space and place. *Space and place are two related but distinct things: the first, related to material reality; the latter, as an emotional and ideological conception* (Luz, 2008).

3.1.2 Role of the dormitory within the campus environment

Building design in a campus environment impacts the overall student experience. On a university campus, the dormitory is equally important as the education building. The dormitory building has the greatest effect on the student’s experience since they spend much of their time there for both leisure and learning time. It shapes the way in which a student lives, works, and interacts with their peers and colleagues in university life (Strange, & Banning, 2015). For the dormitory to become a place, it must allow for informal interaction by bringing together living, working, and leisure activities for manageable numbers of people, where staff and students from different disciplines can mix. Good dormitory design leads to better educational outcomes through the complex interaction between space and people, rather than simply providing individuals with a certain type of working or social environment (Temple, 2014). The best example of a dormitory within a creative campus is the Bauhaus dormitory building – Prellerhaus, on the Bauhaus Dessau Campus, Germany. In the context of creative study, the Bauhaus Campus shows that the dormitory has a significant role in shaping the student’s experience. Apart from being a good quality, untroubled living space, the design of the Prellerhaus helps to generate positive social interaction. In a broader context, the dormitory design should represent a specific place like ‘home’.

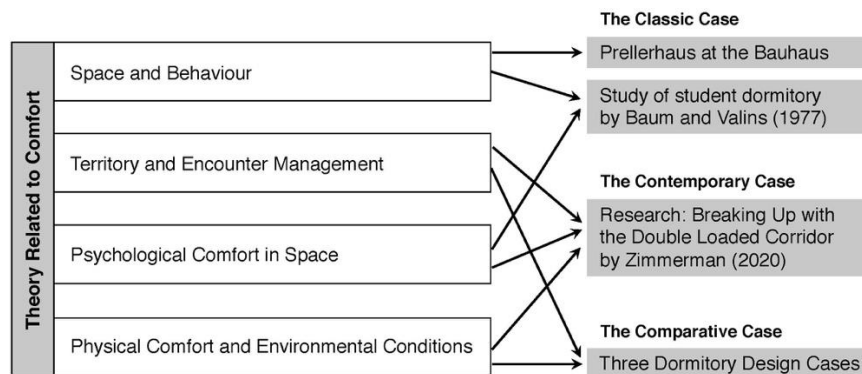


Figure 4 Diagram showing relationship between theoretical studies and case studies (Source: Lumthaweepaisal, 2022)

The study of theory in relation to comfort in the spatial design context and the role of a dormitory within the campus environment provides a framework for the research on the selected case study (Figure 4).

3.2 Case Studies

3.2.1 Learning from dormitory case studies

The Classic Case. One of the most popular dormitory designs is the corridor type – a double or single-loaded corridor for space management and efficiency. The British psychologist, David Halpern, gives an example of a student dormitory in the US in a study conducted by Baum and Valins (1977) in the book *‘Building Happiness: Architecture to Make You Smile*’ (Wernick, 2008). The study focuses on student experiences and the behaviours generated by two different types of dormitory design: double-loaded corridor and suite. Interestingly, the two most common spatial living arrangements influence how students interact and maintain relationships in an opposite manner.

The Contemporary Case. This research explores the contemporary idea of a living space in mid-rise and high-rise buildings. The study by Zimmerman (2020) focuses on contemporary residential architecture in Germany and Denmark. His work entitled, *'Breaking Up with the Double Loaded Corridor: A Study of Progressive Housing Design and Its Influence on Social Networks'*, contains a topic relevant to dormitories, referred to as 'Human scale intervention'. He discusses three spatial apparatus for creating a productive social space: *Intermediate spaces*, *Balcony as connector*, and *Save the best for public*.

The Comparative Case. The scale of an education institution matters. The university design is complex since it contains a school, faculty, and other public facilities. Therefore, this research is expanded to include the universal dormitory context within the greater campus environment. Three international case studies on university campus dormitories are selected for this research: 1) *Campus Hall*, University of Southern Denmark, Odense, Denmark (Møller, 2015); 2) *Oylmpe de Gouges University Student Housing*, Paul Sabatier University, Toulouse, France, (Scalene Architects, Almudever Fabrique d'Architecture and PPA architectures, 2017); and 3) *Student Housing Diagonal Besos*, Barcelona East School of Engineering in Sant Adrià del Besòs, Barcelona, Spain (MDBA and POLO Architects, 2019).

The case studies are analysed through floor plans, spatial usage, programming, and zoning inside the living unit to provide an architectural comparison of the various designs. The proportion of space (m²) is defined by function, consisting of Living unit (blue), Common space (orange), Circulation (yellow), Service area (Grey), and Landscape (green). These are then calculated in percentage terms and each project compared. The summary graph (Figure 5) shows the weight that different architects allocate to certain communal living spaces.

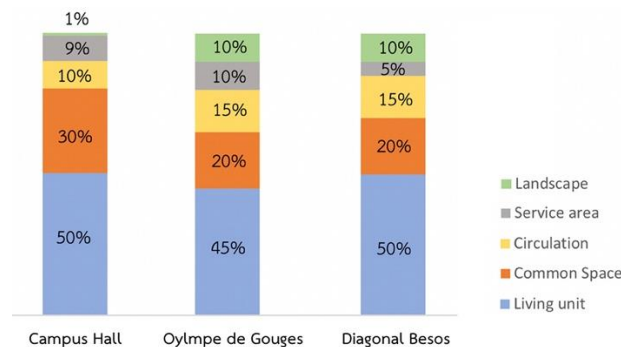


Figure 5 Summary of the dormitory spaces in the case studies, defined by function
(Source: Lumthaweepaisal, 2021)

In contrast to the typical double or single-loaded corridor dormitory design, the three case studies put greater investment into the living quality inside the building rather than space efficiency. According to the summary graph (Figure 5), the percentage of living units in all projects is no more than 50%, with an increasing proportion of common spaces. As for the circulation space, in general practice, this should represent no less than 20% of the total building area. It can be clearly observed from Figure 5 that the percentage of circulation space in the three projects does not meet this space requirement, accounting for only around 10–15%. This emphasises the idea of integrating circulation with other common spaces, which is obviously present in all projects. Apart from its essential function, the dormitory should also provide *good quality space* where individuals can: (1) stay inside the room with decent lighting quality and have access to natural light; (2) easily access a view and/or green space without effort; (3) control visual connection – to see, not to see, be seen, or not be seen; (4) not encounter any dead-end space inside the building; (5) enjoy walking and utilising the corridor space; (6) choose to participate in or escape from various kinds of social activities; and (7) feel at ease and comfortable while living in the dormitory.

3.2.2 Case of King Mongkut's University of Technology Thonburi, Bangkhuntien Campus

Built in 2000, the KMUTT Bangkhuntien Campus consists of three main zones: Academic, Research/Pilot-Plant, and Dormitory and Recreation (built later in 2010). There are three schools in the Academic Zone: School of Bioresources and Technology (SBT), School of Architecture and Design (SoA+D), and Media Technology and Applied Arts (MTA); the last two being used for creative practices. Students from both schools share the same dormitory and facilities (Figure 6).

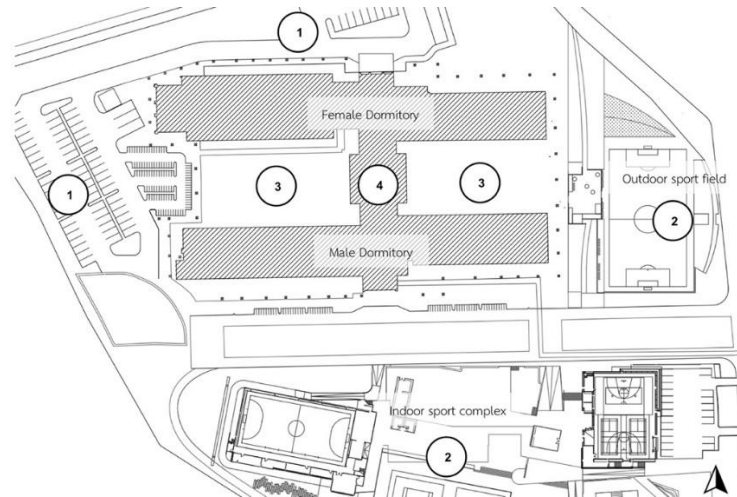


Figure 6 Master plan of the Bangkhuntien Campus dormitory and surrounding facilities: 1) Outdoor parking area; 2) Sports complex; 3) Outdoor courtyard; and 4) Single-sex dormitories – Male (South Hall) and Female (North Hall)
(Drawn by second-year Interior Architecture students for INA242 class of 2/2020)

As with the majority of university campus buildings in Thailand, the Bangkhuntien Campus dormitory was constructed on the basis of standard requirements and economical concerns. The exterior of the dormitory presents itself as a typical university building with no character. Why is the exterior of the building significant? The outer shell or façade of the building involves various spatial consequences. It suggests the way in which people can interact with the space – architectural elements such as openings, voids, entrances, windows, corridors, and courtyards can appear to be either welcoming or obstructive to the user. It can also form a sense of place and spatial identity, enabling users to recognise the place and make them feel they belong to the community. The interior functions tend to be generic, with public facilities packed into the ground floor and a stack of double-loaded corridor living units on the upper floors. Spatial experience is also linked to environmental conditions, influencing the level of sensory comfort perceived (Figure 7).

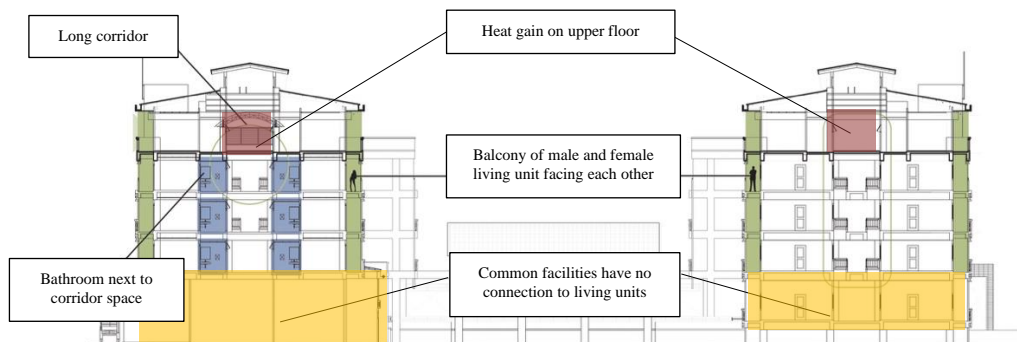


Figure 7 Sectional diagram of two dormitory buildings showing the negative spatial experience generated by the spatial organisation (Drawn by second-year Interior Architecture students for INA242 class of 2/2020)

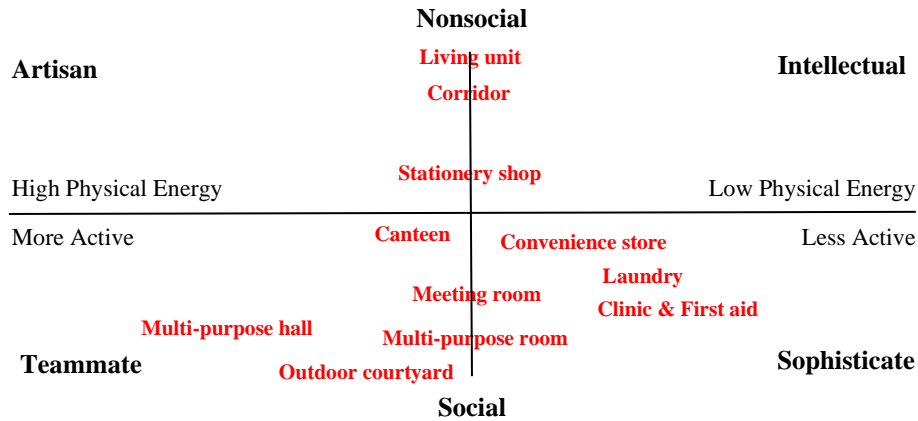


Figure 8 Augustin's quadrant living model, mapped with the dormitory function (Adapted from Augustin, 2009)

This research attempts to understand the existing spatial experience of students towards the dormitory by mapping the functions with Sally Augustin's quadrant living model (Figure 8). The functions inside the dormitory appear to be leaning towards the social side, with some facilities being quite generic since they remain in the middle of the graph. This can explain why some of the common facilities have low usage. Spatial experience is also connected to the psychological comfort of the space. To feel comfortable, an individual needs to adjust to the space and become familiar with the place. In the contemporary context where people are more concerned about health, well-being, and spatial experience, universities have the opportunity to rethink the dormitory design to create a better living environment. The study of the living conditions for undergraduate students in dormitories reveals how students adapt to the space and manage their territories inside the living units.

3.3 Lived Conditions: Study of Dormitory Living

The research uses the collected existing data to gain in-depth knowledge of spatial usage inside the living units of Bangkhuntien student dormitory. The research involves 20 existing residents – 10 volunteers from the female dormitory and 10 from the male dormitory with random room types (Figure 9).

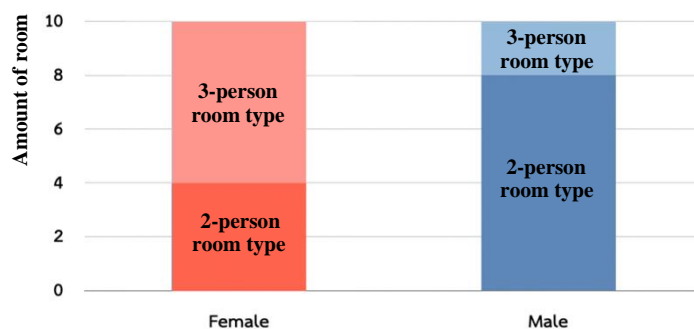


Figure 9 Voluntary living units divided by gender and room type (Source: Lumthaweepaisal, 2021)

Data on the actual living conditions of 20 volunteer dormitory residents was collected using three methods: 1) *interview and questionnaire survey*; 2) *furniture layout with spatial usage information*; and 3) *photographs of actual living conditions*. The statistics presented in the graph (Figure 8) reflect the room type preferences for students of different genders. According to the interviews, female residents tend to favour a three-person room type more than male residents due to its cost-effectiveness and living atmosphere. Female residents appear to bond and manage conflict among roommates better than male residents. Some female residents also claim that the three-person room type is more comfortable in terms of relationship management.

These issues are the main motivation for room type preference. The study shows examples of furniture layouts which have been altered from the initial design of the dormitory to fit with the requirements and territory management of users. This reflects how the residents use furniture to manage personal spaces and demarcate their territories (Figure 10).

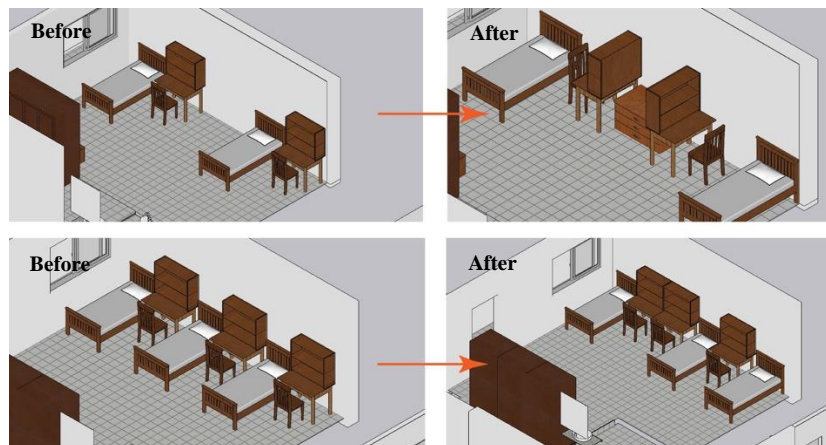


Figure 10 Examples of furniture layouts (Male dormitory unit two-person room type) altered from the initial dormitory design to fit with needs and territory management of users (Drawn by Petchsakae, Mahasittichod, Chew, and Sornnarin for INA242 class of 2/2020)

In order to understand the diverse situations influencing the furniture layouts of the 20 living units, this research uses five criteria to illustrate space management among residents: 1) Furniture ownership; 2) Shared furniture; 3) Working space; 4) Dining space; and 5) Storage space. The floor plan and furniture layout are the mapping tools applied to comprehend the space usage. The 20 living situations are explained in the following section.

3.3.1 Furniture ownership and shared furniture

The data collected on each living unit shows that the residents have clear furniture possession while some personal furniture is used as shared furniture (Figure 11).



Figure 11 Unit Room 2 (three-person room type) showing furniture ownership and shared furniture; the residents only share appliances, not furniture. Colours are used to represent the three different users. (Source: Lumthaweepaisal, 2021)

3.3.2 Working and dining space

The living units under study are considered to be small when residents have to work, especially the three-person room type, and there is no proper space for dining. The collected data shows many overlapping activities, such as working, dining, and sleeping (Figure 12). These activities are easier to manage in the two-person room type (Figure 13). The working table provided is not appropriate for design-related work thus the residents tend to bring their own furniture and equipment.

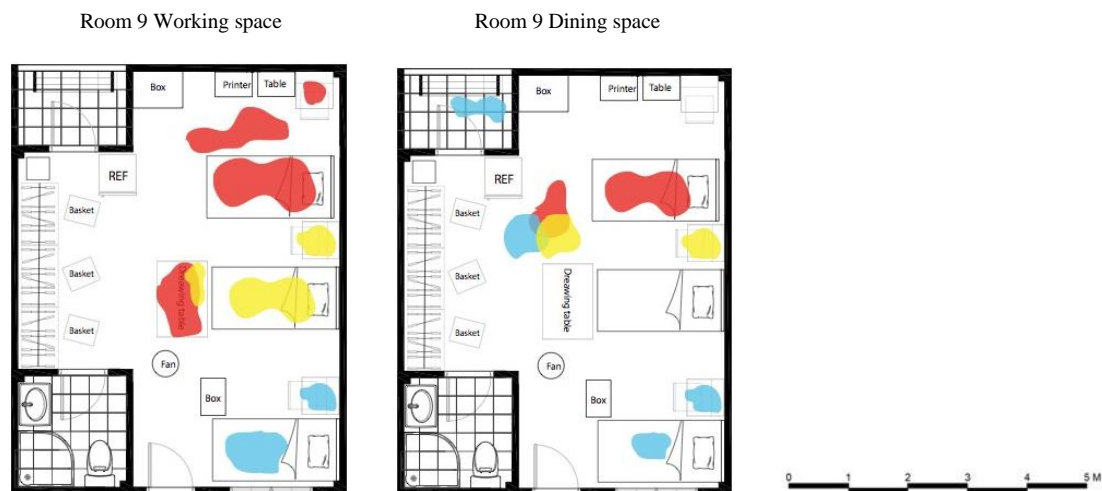


Figure 12 Unit Room 9 (three-persons room type) showing the working space and dining area. Colours are used to represent the three different users. (Source: Lumthaweepaisal, 2021)



Figure 13 Unit Room 17 (two-person room type) showing the working space and dining area. Colours are used to represent the two different users. (Source: Lumthaweepaisal, 2021)

3.3.3 Storage space

Storage space is another important factor that appears to have been overlooked in the living unit design. The collected data shows insufficient storage space in every living unit – the countertop of the underused kitchenette, space underneath the bed, and space above the wardrobe are used for extra storage (Figure 14). The lack of storage space is the greatest issue negatively affecting living quality.

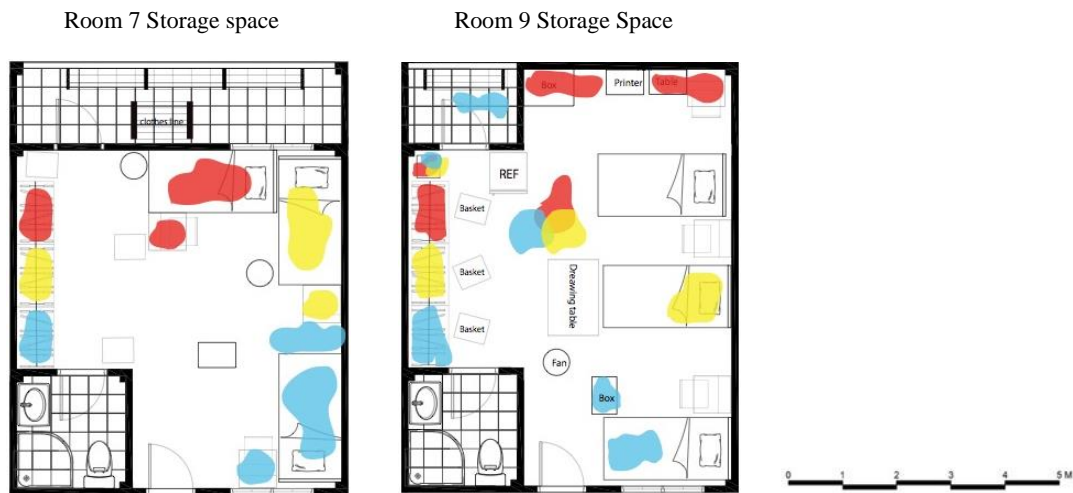


Figure 14 The insufficient storage space in Unit Rooms 7 and 9. Colours are used to represent the three different users.
(Source: Lumthaweepaisal, 2021)

The study of living conditions can be summarised as follows:

- The three-person room type is overcrowded and problematic for space management
 - The living units lack the private space necessary for healthy living
 - There is no proper working space which can lead to an unhealthy working posture
 - The living units provide insufficient storage space
 - The sleeping area is organised in two forms: separate and united
 - The two-person room type makes it easier for the residents to demarcate their territory
 - The three-person room type tends to allow for more collective activities among residents
- There is no buffer area between the living unit and corridor

4. Results and Discussion

This study reveals that the spatial design of the dormitory has the potential to be developed further by employing the findings of the research topic on living conditions as a lab-based learning project. The topic fits perfectly with the typology of space students need to learn in their second year – residential design. This lab-based learning experiment would allow for the actual users of the Bangkhuntien Campus dormitory to develop creative ideas and design solutions relating to comfort under the *Co-Residency* theme. The INA242 Interior Architectural Design II focuses on residential design by rethinking and reprogramming the student dormitory of Bangkhuntien Campus, KMUTT. Students investigate the degree of publicity and privacy of the ‘co-living space’, with the main task being materialising new programmes, new space planning, and new designs for the dormitory. The studio work focuses on developing investigative methods and tools with an emphasis on experimentation rather than providing a single solution. Daily programmes are studied and investigated while spatial apparatuses are invented to support the needs of inhabitants. Design keywords such as *Shared vs Private*; *Indoor vs Outdoor*; *Collective vs Individual*; and *Casual vs Formal* are introduced to the students in order to suggest potential design issues. This paper selects two interesting design proposals for tackling the following issues: 1) unisex dormitories and 2) creating a homey feeling inside the dormitory. They questioning the existing conditions of the dormitory and generating two proposals namely the Unite, and the Homey Dorm responding to the initial issues respectively.

The Unite. This project raises the question ‘How can the Bangkhuntien Campus dormitory transform from a gender binary to gender inclusive dormitory?’ This question is linked to the theory of territory and encounter management, whereby students seek more freedom of interaction among colleagues and friends in their living quarters. A lack of freedom can lead to an uncomfortable living experience. This question also relates to the theory of psychological comfort in space, and the separation of gender, which is

believed to generate disconnection in the communal sense among residents. According to the university's policy, changing the campus dormitory from gender binary to gender inclusive is impossible. The research indicates that this is a straightforward question, and policy limitations have led towards a creative proposal.

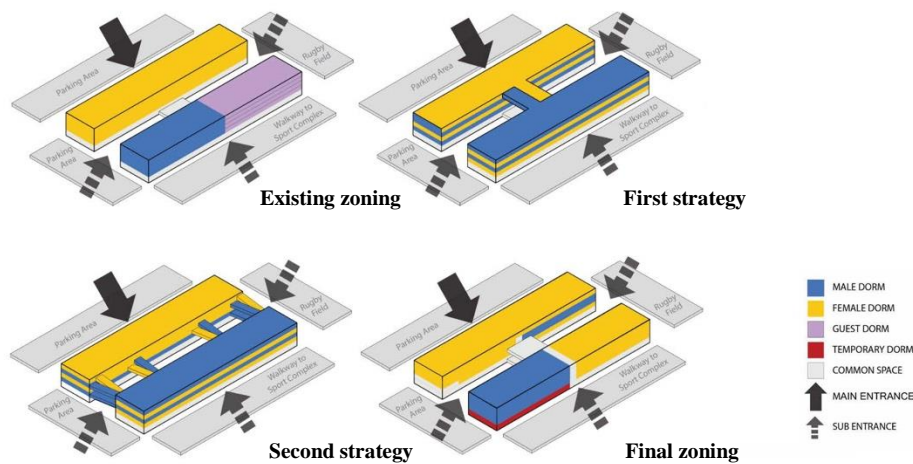


Figure 15 Zoning design strategy: 1) existing zones; 2) first strategy – mixed gender; 3) second strategy – inner loop; and 4) final zoning – shuffle and interlock (Drawn by Matsombat, Saidarasamoot, Kiatsirikulthorn, and Poe Tun for INA242 class of 2/2020)

The transformation diagram (Figure 15) shows how the existing zones can be shuffled and interlocked to create togetherness among gender through perception and visual connection. The final zoning shows the application of two keywords: shuffle and interlock, both of which affect the organisation of space, volume of space, and living unit design (Figure 16). The final design proposal offers more common spaces for communal activities, such as the expansion of the canteen and café (Figure 17), the addition of an intermediate co-working space between the North and South building, and changing the double-loaded corridor into a loop corridor (Figure 18), thereby linking the three spatial apparatus to make a productive social space as suggested by Frank Zimmerman (2020).



Figure 16 Application of the two keywords: shuffle and interlock. The double-height space of the canteen on the first floor encourages visual and physical connection to the co-working space on the second floor. The sleeping area of the living unit utilises the interlocking design. (Drawn by Matsombat, Saidarasamoot, Kiatsirikulthorn, and Poe Tun for INA242 class of 2/2020)



Figure 17 The canteen and café area connected to the outdoor garden offer a better environment for socialisation
(Drawn by Matsombat, Saidarasamoot, Kiatsirikulthorn, and Poe Tun for INA242 class of 2/2020)

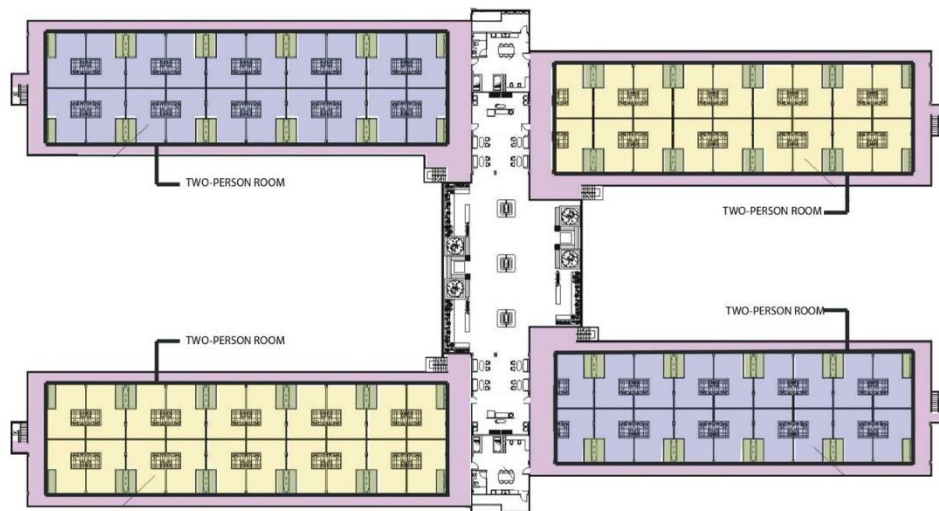


Figure 18 Third-floor plan of the building showing the shuffle position of the male (purple colour) and female (yellow colour) dormitories, the loop corridor (pink colour) of each quarter zone, and the bridge to the intermediate communal facilities (white colour) connecting the two buildings together (Drawn by Matsombat, Saidarasamoot, Kiatsirikulthorn, and Poe Tun for INA242 class of 2/2020)



Figure 19 Furniture layout for the two-person room type (left) and four-person room type (right) showing the living environment and space organisation, improved from the existing dormitory conditions (Drawn by Matsombat, Saidarasamoot, Kiatsirikulthorn, and Poe Tun for INA242 class of 2/2020)

The living units are organised into two-person and four-person room types (Figure 19) to accommodate diverse requirements. The interior space of each living unit is designed to be more spacious but practical in order to improve working and living quality (Figure 20).



Figure 20 Atmosphere of four-person room type showing the living environment, improved from the existing dormitory (Drawn by Matsombat, Saidarasamoot, Kiatsirikulthorn, and Poe Tun for INA242 class of 2/2020)

The Homey Dorm. This project began with a critique of the existing atmosphere of the dormitory, addressing its lack of comfort and failure to make students feel at home. The circulation of the female and male dormitories is too separate and does not encourage friendly social interaction. Thus, a reorganisation of the zoning for female and male dormitories is proposed, along with the expansion of the vertical circulation core through the provision of various communal facilities. Residents are categorised into two types: private and sociable, in order to implement a suitable design for two types of living atmosphere.

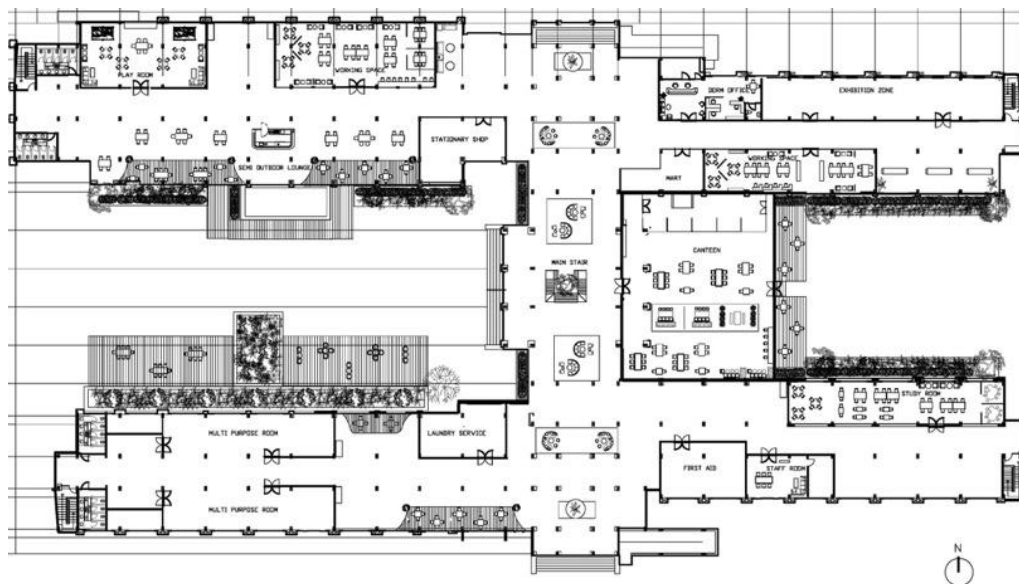


Figure 21 First-floor plan showing the semi-outdoor space expansion and a connected pathway that guests and residents can use together (Drawn by Petchsakae, Mahasittichod, Chew, and Somnarin for INA242 class of 2/2020)

The first floor is the key to creating a homey atmosphere and should be treated as a welcoming space for both residents and guests – like a living room. Several semi-outdoor terraces are proposed to expand the communal space. Residents and guests can choose to use indoor or semi-outdoor spaces without being forced to do so (Figure 21). The space planning of the living floors is reorganised into small clusters with pocket

communal facilities to provide more specific home-like spaces for residents (Figure 22). The design of the interior spaces attempts to mimic a home-like atmosphere (Figure 23 and 24).



Figure 22 Second-floor plan of the building showing the cluster space with pocket communal facilities (Drawn by Petchsakae, Mahasittichod, Chew, and Sornnarin for INA242 class of 2/2020)

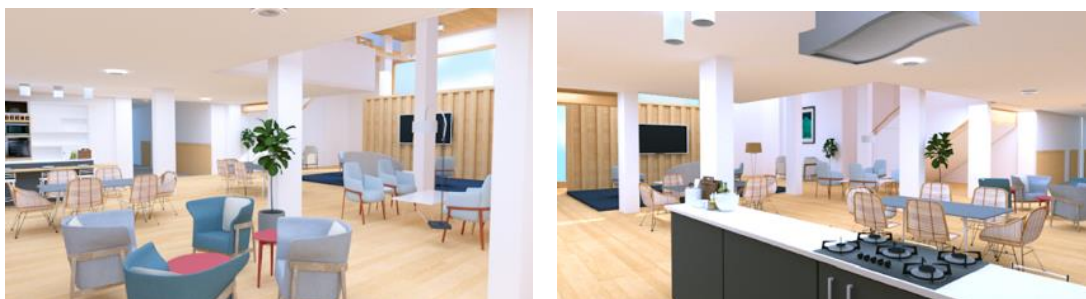


Figure 23 Communal facilities – common area (left) and co-kitchen (right) demonstrate the importance of communal activities, reflecting home-like activities in the living room and kitchen (Drawn by Petchsakae, Mahasittichod, Chew, and Sornnarin for INA242 class of 2/2020)

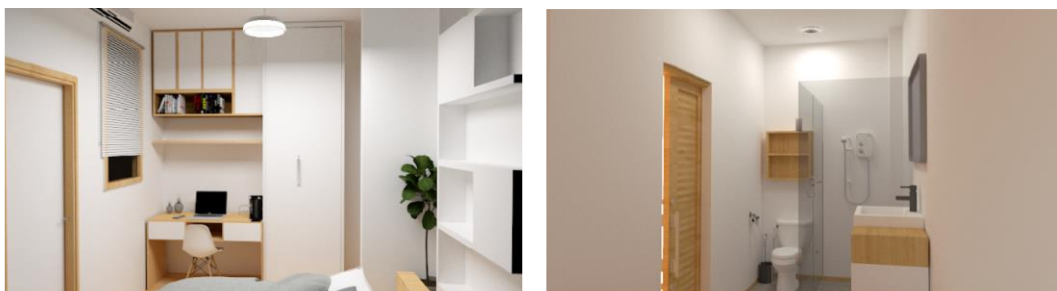


Figure 24 Living unit demonstrating a calm and homey interior, allowing the residents to have quality private spaces (Drawn by Petchsakae, Mahasittichod, Chew, and Sornnarin for INA242 class of 2/2020)

Considering ‘*comfort*’ as a topic for improving the quality of dormitory buildings, the university must not overlook the study of living conditions and the feedback provided by existing residents. According to the research findings, the potential exists to incorporate the actual users in the design process. The design proposals from the Interior Architectural Design II studio suggest various possibilities for developing the existing dormitory, and various design agendas are identified, which link to the theory relating to comfort and case studies. Students raised various significant issues during the site survey and design process, such as the restrictions imposed by the existing physical environment, territory alterations between public and private spaces, lack of opportunity for collectiveness among peers and colleagues, an unhealthy and unproductive living environment, etc. It can therefore be confirmed that the design proposals respond to the requirements of actual users.

5. Conclusion

The previously reviewed ‘*Ecology of Individual Students*’ presented in Figure 1 indicates that the most immediate experience of students in relation to the campus environment is through the components of the so-called *Mesosystem* (Renn and Arnold, 2003). The dormitory is one of the immediate spaces in the *Mesosystem* relating to roommates and friendship groups for students, which in turn also connects to the faculty, curriculum, and committee in the *exosystem* along with the sociocultural aspects in the *macrosystem*. In conclusion, this research presents the design criteria for a better Campus Dormitory Design: The Case of King Mongkut’s University of Technology Thonburi, Bangkhuntien Campus.

Natural light. Provide enough natural light and make it controllable for the residents to enable them to let in or dim natural light as required.

Visual connection. A visual connection that works on two levels person to person and person to surroundings. Residents can choose to see or be seen, and spaces should connect to the surrounding view or greenery.

Physical connection. Attempt to eliminate a dead-end corridor and create a communal space as an area connector for residents.

Territory management. Provide different levels for interaction and socialisation. Residents must have power over their own territory and choose to be alone or participate in communal activities without being forced to do.

Make a space become a place. Create a good quality living space for residents to make them feel at home.

These design criteria are present in all dormitory case studies and the two selected design proposals from the Interior Architectural Design II studio. This research aims to encourage KMUTT’s Bangkhuntien Campus dormitory to evaluate its current performance in terms of living atmosphere, space operation, and spatial organisation. The peculiar characteristic of the dormitory as half temporary and half permanent accommodation will never change. However, the dormitory design can be changed to accommodate and provide a better living environment as a temporary home for undergraduate students. The living experience of students will then be enhanced to support their transition into adulthood and make this period more meaningful.

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Understanding the Pali Canon through Keyword Analysis: A Comparison between Different Reference Corpora

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Abstract

This study was to conduct keyword analyses on the English Pali Canon and compare keywords generated by four different reference corpora which varied in genre and size. The software *AntConc* 3.5.9 was employed for analyzing and generating the keyword lists. Two node corpora were compiled using samples from two English translations of the Pali Canon and the reference corpora were the node corpora themselves, a collection of other religions' canons, the Manually Annotated Sub-Corpus (MASC), and the British National Corpus (BNC). It was found that the numbers of keywords were the highest when BNC, which was the largest and more general, was used as the reference corpus. The results were compared to select the keywords that recurred at the top of most, if not all, keyword lists. It can be seen that, regardless of the reference corpora, most of the top keywords were nouns referring to people or characters in the Pali Canon, such as *the Exalted One*, *brethren*, *Gotama*, and *Ānanda* as these names and words were not frequently found in other texts. The comparison of reference corpora can help researchers find the most appropriate reference corpus and ensure the selection of keywords in the creation of a Buddhist wordlist for further research.

Keywords: *Keyword Analysis, the Pali Canon, Corpus Analysis, English for Specific Purposes, Digha Nikaya*

1. Introduction

The roles of language used in religious contexts have not received much attention by researchers, especially when compared with language use in academic and occupational contexts (Alsaawi, 2020). Within the profoundly explored area of English for specific purposes (ESP), there are only a small number of research articles on English for religious purposes (ERP). Moreover, studies in ERP usually explore language use in Christian or Islamic contexts while there are only a few studies, such as Liu's (2007) which is considered the first ERP research (Suphipat, 2017), investigating language use in a Buddhist context. Even though it seems that the 'specific purposes' of ESP are overwhelmed with academic and occupational purposes, ESP concepts and tools can also benefit the investigation of the English language for other purposes like spiritual development. In ESP exploration, one of the common tools is the use of corpus to facilitate researchers in finding the most frequent words and lexical bundles, exploring collocations, and identifying keywords of language used in a particular context. With the help of corpus tools, a corpus is analyzed and lists of words, as well as bundles, are generated as required. While researchers have been widely interested in academic and occupational vocabulary, only a small number of studies have employed corpus tools to explore words in religious contexts.

English for Buddhism has been "a completely new branch of ESP" (Liu, 2007). Buddhist language is unique on lexical, phrasal, and discoursal levels (Suphipat, & Chinokul, 2018), and the lexical level can be investigated by using ESP concepts and corpus tools. To explore words used in Buddhist texts, we conducted keyword analysis, focusing on the written language in the Pali Canon, the oldest collection of the Buddha's teachings. The results of keyword analysis on the English Pali Canon can be customized for future use, such as a development of Buddhist materials or a translation of Buddhist texts.

To conduct a keyword analysis, the studied corpus needs to be compared with another collection of texts called a reference corpus to generate a keyword list. Previous studies employing keyword analysis often use one reference to generate keywords. In this study, multiple reference corpora were used for comparing

keywords from different keyword lists and identifying the most distinct, recurring keywords with high keyness values regardless of reference corpora. The comparison of results was also carried out for the selection of an appropriate reference corpus for further study. Accordingly, the objectives of this study were to find and compare keywords in the English Pali Canon retrieved from different reference corpora.

The study used a corpus linguistic tool to bring religious language into the interest of ESP researchers as there has been an obvious lack of studies on the use of religious language from a linguistic point of view. As mentioned earlier that this paper focuses on keyword analysis of the Pali Canon, below is the review of religious teaching, the Pali Canon, and the keyword analysis method, with the inclusion of previous related studies.

1.1 Religious Teaching

The definition of religion has not been agreed upon (Greil, 2009), but its impacts on our global and local communities as well as individuals are evident. Despite their positive effects (Roberts, 2019), religious beliefs and teachings have been claimed to declare conflicts and wars (Sherwood, 2018), which are often claimed to be the results of misinterpretation of religious teachings. These inaccuracies may stem from the extraordinariness of language used in religious contexts in order to create sacredness (Sawyer, 2001) and the vocabulary used for religious purposes is unique (Dazdarevic, 2012), making religious language different from everyday language.

For many religions, the core teachings are generally collected in scriptures and other related texts. Factors, such as geography and time of origination of religion, distinguish these sacred texts (Sah & Fokoué, 2019). Religious teachings are passed on from generation to generation through these texts. For Buddhism, especially Theravada Buddhism which is one of the three main branches of the religion, it is believed that the Buddha's teachings are collected in the Pali Canon. Hence, the Pali Canon will be used as the source of this study to identify Buddhist keywords.

1.2 The Teachings in the Pali Canon

The Pali Canon (or Tipitaka in Pali and Tripitaka in Sanskrit) is believed to be the oldest collection of Buddha's teachings. The literal meaning of Tipitaka or Tripitaka is 'the Three Baskets' in which the Pali Canon is divided into three sections: Vinaya, Sutta, and Abhidhamma. The first section contains monastic rules and is primarily for monks and Buddhist nuns. The second section, Sutta, which is the focus of the study contains narrative stories and teachings on various occasions when the Buddha was alive. The third section is the special doctrines for the more experienced. Generally, Sutta is recommended for all kinds of readers to study because it is neither too advanced nor too specific for a particular group of Buddhists; therefore, this study would like to begin with the part of the Pali Canon that is readable and understandable for various groups of readers. Sutta is further divided into five sub-sections, covering over 10,000 teachings. For feasibility, this trial initially focuses on the first sub-section of Sutta called Digha Nikaya which contains 34 long discourses.

1.3 Role of Corpus

A corpus is a collection of machine-readable written texts or transcriptions (Crystal, 1992) which occur naturally (Sinclair, 1991). Results from corpus analysis, especially the generated lists of lexical items (McEnery, & Wilson, 1996) are useful for language pedagogy. For direct use of corpus, learners and teachers may perform an active investigation of the corpus by themselves while researchers and materials writers may adopt the indirect use of corpus by exploring and selecting useful information for learners (Campoy, Cubillo, Belles-Fortuno, & Gea-Valor, 2010). In ESP, one of the well-known systems of analyses of corpora is to generate a frequency list of which the units of analyses can be individual words, lexical bundles, clusters, and keywords. Responding to the objectives of this study, keyword analysis is performed to generate Buddhist keywords that are significant in the Pali Canon, but not frequently found in other texts.

Keywords are words that occur more frequently with significance in the sample text in comparison with texts in a reference corpus (Stubbs, 2010). An important concept related to keywords is keyness, 'a quality which is generally intuitively obvious' (Scott, & Tribble, 2006). Keywords mark the aboutness and style of texts in the studied corpus (Scott, & Tribble, 2006) and present "a rapid and replicable overview of

the characteristic themes” as well as the characteristic of each text (Brookes, & McEnery, 2019). Moreover, keyword analysis can benefit various fields of study, such as language teaching, content analysis, and stylistics.

Keywords can be elicited through the use of a concordancing tool, such as *AntConc* and *WordSmith*. Up until the keyword list is generated, the process is quantitative and objective. Depending on many factors, a list of keywords can be very long and unmanageable. Researchers (Scott, & Tribble, 2006; Grabowski, 2015) often get involved with the list and decide on the cut-off point as well as making some criteria to shorten and customize the lists to meet their needs and their study’s purpose. These decisions affect keyword results and make the method more subjective.

To generate a keyword list, a corpus of texts that are to be investigated must be compiled. This is called a target corpus, a study corpus, or a node corpus. Then a reference corpus is required for the node corpus to be compared. There are four key factors of a reference corpus that are likely to affect keyword results and these factors are size, genre, historical period, and varietal differences (Abeed, 2017). Researchers (Scott, 2009) have acknowledged differences in results of keyword analysis when using different reference corpora, yet it seems the only requirement widely accepted for a reference corpus is that its size should be larger than the node corpus (Goh, 2011). McEnery, Xiao, and Tono (2006) did not place the size of a corpus as a significant factor for keyword analysis. This is evident in Goh’s (2011) study testing the effects of these four factors and it was found that genre and diachrony of a reference corpus made the most statistically significant impacts on keyword results.

Keywords of two-node corpora from three different reference corpora with different sub-registers were compared in Geluso and Hirsch’s (2019) study. They reported that a reference corpus with the same sub-register of the node corpus could elicit the distinct content of the node corpus and keywords were clustered in a small number of texts in the corpus. On the other hand, using a reference corpus with a different sub-register could show shared content between the node corpora. They also stated that although the register of a reference corpus affected the results of keyword analysis, using an adequate-size reference corpus of any register could eventually generate the core keywords of the node corpus. The selection of reference corpus was also emphasized in Maiwald’s (2011) study on the corpus stylistics of George MacDonald’s fiction. The keywords with the highest keyness values in the fiction were proper nouns. As different reference corpora were used in his study, Maiwald (2011) stressed that the reference corpus had an effect on keywords’ semantic domains.

Among previous analyses of keywords, only a small number of studies have paid attention to religious language. One of them is Lien (2022) who investigated keywords in the Buddhist corpus of 20 million words, consisting of different types of Buddhism-related texts. Overall, there were 1,244 keywords in the wordlist retrieved through *WordSmith*. Lien (2022) recommended the application of multilevel methods in performing keyword analyses to create specialized field wordlists. To do so, she used frequency, log-likelihood, which is a probability statistic indicating the confidence that a word is key, and odds ratio, which is an effect size statistic denoting the association of word frequency in the node corpus and the reference corpus. Her study presented the distinct words in general Buddhist contexts and most of the words were different from the top keywords in the Pali Canon found in this study.

2. Objectives

- 1) To find keywords in the samples of the English Pali Canon
- 2) To compare keywords of the English Pali Canon generated by four different reference corpora

3. Materials and Method

The following section explains the compilation of corpora and the process of keyword analysis for this study. Two node corpora consisting of samples from the Pali Canon were needed to find and compare Buddhist keywords from the Pali Canon and three reference corpora, varying in size and genre, were used to generate different keyword lists for comparison. Also, *AntConc* Version 3.5.9 (Anthony, 2020) with its default setting for keyword analysis was used as the concordancing software for these analyses.

3.1 The Node Corpora – Samples from the Pali Canon

As the study investigated keywords from the Pali Canon, specialized corpora containing texts from the English Pali Canon were compiled. Originally, the Pali Canon is written in the Pali language. It has been translated into many languages, including English. Two versions of the English Pali Canon were selected to be included in the corpora. The first English translation of the Pali Canon was published by The Pali Text Society and translated by various translators from the 19th century to the 20th century. The other version was translated by Maurice Walshe who was a vice president of the Buddhist Society. These two versions of the English translation are complete English translations of the Pali Canon from the Pali language. Using both translations helped in finding similarities or what was retained in the texts as the cores, regardless of influencing factors, such as time and translators as well as showing differences between the translations or elements that changed due to factors, such as language styles and translators' interpretation.

Since there were two versions of translation, each version was compiled as its own node corpus and the results of keyword analysis were later compared. The texts in the compiled node corpora were from these four books:

- (1) *Dialogues of the Buddha Part I* (1899) translated by T. W. Rhys Davids
- (2) *Dialogues of the Buddha Part II* (1910) translated by T. W. and C. A. F. Rhys Davids
- (3) *Dialogues of the Buddha Part III* (1921) translated by T. W. and C. A. F. Rhys Davids
- (4) *The Long Discourses of the Buddha: A Translation of the Digha Nikaya* (1995) translated by

Maurice Walshe

The first three books were parts of the first complete English translation of the Pali Canon by the Pali Text Society and the last book was a complete English translation of teachings in Digha Nikaya of the Pali Canon. The collection *Dialogues of the Buddha* consisting of three books were compiled in the first node corpus of this study and the whole teachings in the fourth book were collected for the second node corpus. Since both versions were translated from the Pali Canon in the Pali language, the numbers of the teachings were equal: 34 discourses, but only 33 discourses were used for both corpora because one discourse merely guides readers to read a previous discourse that did not contribute much to the content of the teachings and the analysis.

Regarding the numbers of words in the corpora, the first corpus contained 210,743 words and the second corpus contained 146,964 words. In order to conduct a keyword analysis, at least one reference corpus is required. The reference corpora used in this study are described below.

3.2 The Reference Corpora

A reference corpus is needed in a keyword analysis because a node corpus must be compared with a reference in order to identify salient keywords and generate a keyword list. For this study, the node corpora were compared with four reference corpora and each node corpus was also used as a reference corpus for the other. Therefore, the details of the first reference corpora are as explained in the previous section. The other three reference corpora were for both node corpora. These reference corpora were comprised of a corpus of other religions' canons: the Bible and the Koran (totaling 3,100,000 words), MASC or Manually Annotated Sub-Corpus (500,000 words) which consisted of transcribed speech and written texts from the Open American National Corpus, and lastly, the well-known BNC (100,000,000 words). As Scott (2010) suggested that the larger the reference corpus the better, the number of words in the reference corpora, except when the second node corpus was used as a reference corpus of the first node corpus, which was all higher than the node corpora.

Apart from their size, the reference corpora were various in terms of genre. The first reference corpus of each node corpus was the texts with the same source and content. The difference between each node corpus and its first reference corpus was that they were different translations of the Pali Canon from the Pali language by different translators in different periods. Basically, they were different versions of the same texts. The second reference corpus represented the texts within the same genre; that is, it was a collection of canons of major religions: Christianity and Islam. The third and fourth reference corpora were more general. The third reference corpus contained texts in American English while the fourth was British. In terms of size, it could be said that the first reference corpus shared the same size as the node corpus. In contradiction to the norm

that the size of the reference corpus should be larger than the node corpus, the first reference corpus of the first node corpus was slightly smaller and, of course, the first reference corpus of the second node corpus was slightly larger. The second reference corpus was about 14 times larger than the node corpora. The third was approximately 2 times larger and the fourth was 475 times larger than the node corpora.

Table 1 Corpora's sizes

Corpus	Number of words	Corpus	Number of words
Node corpus #1		Reference corpora for node corpus #1	
Dialogues of the Buddha	210,743	The Long Discourses	146,964
		Other religions' canons	3,100,000
		MASC	500,000
		BNC	100,000,000
Node corpus #2		Reference corpora for node corpus #2	
The Long Discourses	146,964	Dialogues of the Buddha	210,743
		Other religions' canons	3,100,000
		MASC	500,000
		BNC	100,000,000

3.3 Keyword Analysis

After the corpora were compiled, *AntConc* 3.5.9 (Anthony, 2020) was used to generate the keyword lists with $p < 0.05$ and the default setting. Each node corpus was loaded and compared with each reference corpus. In total, there were eight keyword lists. Both content words, such as *king*, *lord*, and *world*, and function words, such as *or*, *has*, and *does*, were all included in the lists, as well as non-words. Pali words and proper nouns were also kept in the lists. This was because the keywords were later selected manually. The selection was subjective, yet the total number of keywords retrieved through the set of analyses was over 10,000 words, which were not feasible for the study. As the number of texts included in the corpus, the reference corpus, and the selection of top words could affect the keyword list (Pojanapunya & Lieungnapar, 2017), it was decided that selected keywords were those in the top 20 of at least three lists, so they were distinctly significant despite the change of reference corpus.

4. Results

Before presenting the results, the nomenclature for each keyword list should be clarified for mutual understanding. To make it convenient for this paper, the lists are mentioned by the names of the reference corpora. That is, when the reference corpus is BNC, the list is referred to as the BNC list. Hence, the Other Canons list show results from the analysis of which the reference corpus is the canons of other religions and the MASC list presents keywords retrieved when the reference corpus is MASC. When the node corpora become the reference corpora, they are called by the names of the books: Dialogues of the Buddha list and The Long Discourses list.

Overall, when comparing the first node corpus with four reference corpora, in the Long Discourses list, there were only 211 keywords, which was much fewer than 1,892 keywords in the Other Canons list, 1,895 in the MASC list, and 3,200 in the BNC list. Due to limited space, it is impossible to present all the keywords in all the lists here. Below in Table 2 are the top 20 keywords in the first node corpus as compared with each reference corpus. Although there are only 20 keywords in each list, it can be seen that some keywords appear in every list and the first three lists share many keywords.

For the second node corpus containing the other version of the English Pali Canon, there were 223 keywords when compared with the first node corpus, 1,510 in the Other Canons list, 1,491 in the MASC list, and 2,512 in the BNC list. The top 20 keywords of each list for this second corpus are presented in Table 3. Many words recur in every list, especially the first three lists. From these two tables, it can be seen that the BNC lists contain more general words, such as *the*, *and*, *in*, and *he*, than the others. This could be a result of the size of the BNC corpus which was the largest, making the BNC keyword lists the longest.

Table 2 Top 20 keywords of the 1st node corpus (Dialogues of the Buddha) VS different reference corpora

Rank	Reference corpus			
	The Long Discourses	Other canons	MASC	BNC
1	Exalted	Exalted	Exalted	the
2	Ānanda	Ānanda	Ānanda	and
3	brethren	one	brethren	of
4	o	Gotama	he	Exalted
5	wit	or	lord	is
6	one	such	Gotama	Ānanda
7	of	venerable	king	brethren
8	brother	has	one	one
9	Brahmans	Brahmans	thus	to
10	Brahman	Brahman	gods	Gotama
11	Brahmā	wit	him	that
12	Tathāgata	state	venerable	he
13	thou	Brahmā	wit	his
14	recluse	Tathāgata	Brahmans	in
15	even	Buddha	Brahman	thus
16	ye	thus	Brahmā	or
17	soul	sir	Tathāgata	him
18	norm	does	and	this
19	Bhikkhus	so	his	so
20	doth	brethren	nor	king

Table 3 Top 20 keywords of the 2nd node corpus (The Long Discourses) VS different reference corpora

Rank	Reference corpus			
	Dialogues of the Buddha	Other canons	MASC	BNC
1	monks	monks	lord	and
2	lord	Dhamma	monks	the
3	Dhamma	Gotama	Dhamma	lord
4	monk	reverend	Gotama	is
5	Ānanda	Brahmins	he	of
6	reverend	monk	reverend	Gotama
7	verse	Ānanda	Brahmins	monks
8	ascetics	ascetic	Ānanda	Dhamma
9	Sutta	Buddha	ascetic	Brahmins
10	Vipassī	Tathāgata	monk	Ānanda
11	Brahmā	Brahmin	Tathāgata	he
12	Tathāgata	mind	Brahmin	his
13	ascetic	devas	devas	Tathāgata
14	Brahmins	self	Buddha	this
15	Ambaṭṭha	Sutta	mind	ascetic
16	devas	Brahmā	Sutta	reverend
17	contemplating	verse	Brahmā	are
18	s	such	blessed	to
19	Nibbāna	or	verse	Buddha
20	ca	ascetics	ascetics	Brahmin

For further application of the results, it has to be decided if the lists should be cleaned, such as by eliminating function words, or other criteria should be set, depending on a study's objective. For this paper, which was aimed at identifying Buddhist keywords and comparing the results of keyword analyses in order to choose the appropriate reference corpus for future use, both content words and function words were kept to explore the overall results of different reference corpora. Some recurring words in the lists which are Pali and proper nouns, such as *Ananda*, should not be eliminated because these terms and names are significant and common in Buddhist contexts.

From the numbers of keywords compared above, it is noticeable that using a reference corpus that share the size and content of the node corpus yield considerably lower numbers of keywords than the others. Further use of this kind of reference corpus may result in missing significant keywords in the texts, but can be beneficial in identifying differences between different translations of the same text and highlighting the distinction of each text. For the second and third reference corpus, the number of generated keywords in the lists were almost equal for both node corpora, although the sizes and genres of the corpora were not the same. It seemed that the canons of other religions in the second reference corpus and general texts in American English in the third yielded quite similar results in terms of numbers of keywords and top keywords. The last reference corpus, which was the largest, generated the highest number of keywords; however, even though the size of the BNC corpus was about 475 times larger than the node corpora, the number of keywords was less than double the number of keywords from the second and the third reference corpus.

5. Discussion

The selection of keywords was clearly subjective but necessary since all generated keywords could not be presented here. The keywords were selected based on their recurrence in the keyword lists as well as their keyness value. Selected keywords, ten words from each node corpus, are shown in Table 4 and Table 5 with their frequency, keyness value, and rank in each list. Some words are not key in a particular list, but all of them are at the top of at least three lists.

Table 4 Selected keywords from the 1st node corpus, Dialogues of the Buddha

keywords	frequency	keyness (1 st reference corpus)	keyness (2 nd reference corpus)	keyness (3 rd reference corpus)	keyness (4 th reference corpus)
Exalted	997	1042.55 (#1)	4133.18 (#1)	8301.05 (#1)	15313.03 (#4)
Ānanda	669	708.55 (#2)	3687.49 (#2)	5700.73 (#2)	11300.63 (#6)
brethren	636	673.56 (#3)	854.41 (#20)	5262.32 (#3)	9953.99 (#7)
one	2248	295.89 (#6)	2522.66 (#3)	2639.48 (#8)	8466.6 (#8)
wit	291	296.42 (#5)	1164.28 (#11)	1857.76 (#13)	3165.65 (#29)
Brahmans	216	228.58 (#9)	1190.14 (#9)	1808.52 (#14)	3593.01 (#24)
Tathāgata	180	190.47 (#12)	991.76 (#14)	1533.42 (#17)	3040.11 (#31)
Gotama	386	-----	2127.12 (#4)	3288.7 (#6)	6494.67 (#10)
venerable	260	-----	1361.74 (#7)	1857.92 (#12)	3537.47 (#25)

Table 5 Selected keywords from the 2nd node corpus, The Long Discourses

keywords	frequency	keyness (1 st reference corpus)	keyness (2 nd reference corpus)	keyness (3 rd reference corpus)	keyness (4 th reference corpus)
monks	431	767.73 (#1)	2624.75 (#1)	3435.73 (#2)	6013.85 (#7)
lord	1383	719.43 (#2)	-	10782.01 (#1)	12835 (#3)
Dhamma	347	508.94 (#3)	2149.32 (#2)	3204.07 (#3)	5713.22 (#8)
reverend	292	388.12 (#5)	1784.79 (#4)	2542.5 (#6)	3660.92 (#16)
Brahmins	276	1337.72 (#11)	156.84 (#14)	1946.6 (#12)	4688.68 (#9)
Ānanda	255	416.97 (#5)	1579.31 (#7)	2354.42 (#8)	4467.65 (#10)

keywords	frequency	keyness (1 st reference corpus)	keyness (2 nd reference corpus)	keyness (3 rd reference corpus)	keyness (4 th reference corpus)
Sutta	183	199.41 (#9)	1133.31 (#15)	1667.5 (#16)	3200.82 (#23)
Tathāgata	234	168.26 (#12)	1449.23 (#10)	2160.49 (#11)	4121.17 (#13)
Gotama	346	-	2143.13 (#3)	3194.83 (#4)	6069.33 (#6)

In Table 4, the first two keywords *Exalted* and *Ānanda* from the first node corpus, Dialogues of the Buddha, are in the same ranks (the first and the second) when compared with three reference corpora, namely, The Long Discourses, Other Canons, and MASC. Even though *Exalted* and *Ānanda* come as the fourth and the sixth in the BNC list, it is worth noting that the three keywords before them are all function words: *the*, *and*, and *of*. This makes *Exalted* and *Ānanda* the first and second content keywords in the BNC list. Apart from that, the keyness values of these words in the BNC list are the highest among the four lists.

If we look at this part of the Pali Canon as a collection of narrative stories, it is not surprising that the two keywords are at the top of the list because both words refer to the protagonists of the stories, appearing in almost every scene and they, of course, do not exist in the reference texts. As keywords point to the ‘aboutness’ of the texts, it can be said that this sub-section of the Pali Canon called Digha Nikaya involves people to whom these two keywords refer.

The word *Exalted* which appears 997 times in the first node corpus is actually found as *the Exalted One* for 925 times. The bundle is used to refer to the Buddha and it is not found in the other corpus which prefers the word, *lord* when referring to the Buddha. Because *Exalted* usually co-occurs with *the* and *One*, this brings *One* to one of the top 10 keywords in every list too. The 2,248 occurrences of *One* in the corpus doubles the occurrences of *Exalted* because *One* is also used as a counting number in the texts. In this context, *Ānanda* is the name of the Buddha’s attendant, so his name is mentioned in the Pali Canon repeatedly. Referring to the same person, the spelling of the name is different in the two corpora: *Ānanda* and *Ānanda*. The only difference at the first letter makes them keywords even though the node corpora were used as a reference corpus for each other.

As for *brethren*, it is ranked as the seventh keyword in the BNC list, but when compared with the canons of other religions, *brethren* is not very distinct. The word is probably used frequently in other religions’ texts and is common in religious contexts. In the first corpus, *brethren* is used by the Buddha to call the monks listening to his teachings. In the other node corpus, *monks* is used instead of *brethren* since the word *brethren* does not appear in the corpus which also makes *monks* the most distinct keyword of the second corpus when using Dialogues of the Buddha as the reference corpus.

Another selected keyword is *Brahmans*. In fact, its singular form, *Brahman*, is also a keyword in these lists. In the second node corpus, *Brahmins* is used instead, yet it is still among the top keywords. In this context, Brahmins or Brahmins are people in the highest ranking of the Hindu four classes. During the time the Buddha had lived and preached, Hinduism has already flourished. Hence, many narratives in the Pali Canon have involved stories about Brahmins. Some concepts and practices in both religions are similar and many Buddhist terms seem to be borrowed from existing terms in Hinduism. Other keywords in the node corpora that reflect the relationship between these two religions include *jhāna* (roughly translated as meditation), and *Nibbāna* (nirvana) which are concepts existing in both religions.

Apart from *the Exalted One*, there are other keywords directly referring to the Buddha. The words are *Gotama* and *Tathāgata* (*Tathāgata* in the second corpus). *Gotama* is the Buddha’s name and it certainly appears in both node corpora with the same spelling (386 times in Dialogues of the Buddha and 346 times in The Long discourses). Obviously, with similar frequencies, it was not a keyword when the node corpora were compared with each other, but when compared with other reference corpora, its keyness values were high. Both *Tathāgata* and *Tathāgata* are used by the Buddha as first-person pronouns in the Pali Canon. The first node corpus uses the first spelling and the second node corpus uses the other. The different spelling makes them keywords for both corpora.

Next is the keyword *wit* in the first node corpus. *Wit* which is among the top keywords generally follows the word ‘to’ as *to wit*, and in this context, it is used when the Buddha or a preacher would like to

clarify or specify things. The examples below from the 17th discourse and the 33rd discourse of the Pali Canon show how *to wit* is used in the corpus.

“Suppose, now, I were to establish a perpetual grant by the banks of those Lotus-ponds—to wit, food for the hungry, drink for the thirsty, raiment for the naked, means of conveyance for those who have need of it, couches for the tired, wives for those who want wives, gold for the poor, and money for those who are in want.”

(DN-17 Mahā-Sudassana Sutta – The Great King Of Glory)

“Eight wrong factors of character and conduct, to wit, wrong views, intention, speech, action, livelihood, effort, mindfulness, concentration.”

(DN-33 Sangiti Sutta)

In the first corpus, *venerable* is usually used as an adjective to describe people. Its occurrences in the corpus are 260, but for 107 times, it is used as *Venerable Ānanda*. For another 53 times, the word is used to precede the keywords *Gotama*. *Venerable Ānanda* is also found in the second node corpus (42 times). In this second corpus, the frequency is lesser than in the first corpus as *Reverend Ānanda* is also used. However, *Reverend Ānanda* is not found in the first corpus and this makes *reverend* a keyword in the second corpus with high keyness values in every list.

From Table 5, in the second node corpus, *Sutta* is another keyword found in every keyword list. *Sutta* is the name of the second section of the Pali Canon itself and it is used to call each discourse in the section too. The word *Sutta* is also found in the first corpus, but the frequency is as low as 25 while it appears 183 times in the second corpus. Most of the time it appears in the first corpus, it is used as the name of each discourse. Likewise, in the second corpus, 33 occurrences are in the titles of the discourses, but the word is also used as a reference in the Pali Canon. For 150 times, it is used to guide readers to read other discourses. Therefore, when looking at the concordances of *Sutta* in the corpus, it does not contribute much to the content of the discourses. All 150 occurrences appear in parentheses (as *Sutta 1* verse 1.9) which suggests readers go to the first *Sutta* (*Sutta 1*) and read verse 1.9 for more information or clarification. Therefore, this word has only one function which is signifying that the discourses are *Suttas* in the titles and it appears in two places in the corpus, that is, as a title of each discourse and as a reference.

As can be seen from the top 20 keywords of each list and selected keywords, it seems that nouns referring to people are one of the common types of keywords in both node corpora. These keywords include *brethren*, *Gotama*, *Ānanda*, *Ānanda*, *Tathāgata*, *Tathāgata*, *monks*, *lord*, *Brahmans*, and *Brahmins*. Even *Exalted*, the most distinct keyword in the three lists, is actually used with a noun as *the Exalted One* to refer to the Buddha. The prevalence of these nouns at the top of keyword lists is in accordance with Maiwald's (2011) study of George MacDonald's fiction which found that keywords with the highest keyness values were proper nouns. As the samples in both corpora are the Buddha's teachings collected in the form of narratives, the recorders of these teachings need characters who begin, continue, and end the stories like fiction. Consequently, nouns referring to people are significant and they occur more frequently and saliently in this part of the Pali Canon. Most of them even appear in the texts more frequently than familiar Buddhist terms and concepts like *Nibbāna* (nirvana) and *Mindfulness*.

Sometimes, proper nouns are excluded from a vocabulary list as they might not be significant in the studied text or the field that the list is created for. This can be true for academic wordlists. However, for the Pali Canon, we did not cut proper nouns off because the names of people and places in the Pali Canon are generally mentioned when listening to Dhamma or reading Buddhist texts. Therefore, the creation of a Buddhist wordlist should not omit proper nouns if they are significant and common in context because each name signifies its own story and these words are worth knowing for a Buddhist.

Methodologically speaking, it is suggested that for keyword analysis, the larger the reference corpus the better. A reference corpus should have a higher number of tokens than the node corpus. From Table 5, when the reference corpus is The Long Discourses which had a lower number of tokens than the node corpus (Dialogues of the Buddha), it can be seen that the top keywords are similar to the lists of other reference corpora. The top three keywords of the list are the same as the top three keywords of the MASC list. However, the numbers of keywords when the node corpora become the reference corpus for each other are distinctly

lower than those of the others' lists. Using the same text with different versions of translation as the reference corpus can highlight differences in styles of translation and publication as the results show distinct words frequently used in the node corpus, compared with those in the reference corpus. However, such a reference corpus might not provide various groups of keywords and the keywords may not have high keyness values.

On the other hand, a larger and more general reference corpus like BNC can generate a higher number of keywords and the keywords in the BNC lists are more variable than those in the others, but the generated result is not feasible and many keywords in the list are function words which might not contribute much to the main substance of the text. Then, criteria should be set to scope and select certain keywords to make the long list of keywords manageable as well as to meet a study's purpose. It is certain that a reference corpus should be larger than its node corpus in order to generate a list of significant keywords, but other factors, such as genre, also affect the results. Therefore, the trial of reference corpora is an important step before performing a keyword analysis to ensure the selection of an appropriate reference corpus that responds to the study's purpose. For example, to create a Buddhist wordlist, we may not need everyday words like *he*, but include *Exalted* if it is evident that it is significant.

Although each reference corpus yields different results from keyword analysis, the application of results is in the hands of users who apply the lists and words generated from the machine. Researchers may use keyword analysis with texts that are manually unmanageable to scope the data before focusing on specific details for further analysis. For language pedagogy, a wide range of applications of corpus and keyword analysis can be adopted by learners, teachers, and materials developers for learning language use in a particular context. ESP practitioners may especially be apt to include the results from such analysis in their ESP teaching process since these keywords can be interpreted as significant words that are not frequently found in other texts. It is applicable, for example, for materials developers who may create supplementary material for learning significant words in a Buddhist context or a glossary of Buddhist words explaining common vocabulary from the authentic sources. Also, keywords can be a starting point for materials writers for Buddhist studies to elaborate on a particular key topic evident from the analysis. A keyword list like a Buddhist wordlist might not be of extensive use in a general classroom, but it can be applied to benefit other groups of people, such as missionary monks and people interested in the religion who have to learn words in a Buddhist context for preservation and a better understanding of Buddhism.

6. Conclusion

It is known that using different reference corpora in keyword analysis yields different results, but in this study, many top keywords recurred even when a reference corpus was changed. However, the number of keywords generated from different reference corpora varied. The numbers were the smallest when the reference corpus' size was smaller or similar to the size of the node corpus and the number of generated keywords was higher when using larger reference corpora. The reference corpus that was approximately 3-20 times larger than the node corpus yielded quite the same results. Besides, by comparing the top keywords from reference corpora with different genres, it was found that content words generated from these corpora were quite the same. Choosing any reference corpus seems to serve the study's purpose if we only use the top content keywords for further analysis. The top keywords in these lists were mostly either character names or nouns referring to human beings. In this part of the Pali Canon where teachings are collected in the form of narrative stories, characters are salient as the narrators need them to develop the stories. Nevertheless, after the trial of different reference corpora, a more refined selection of keywords and the analysis of the other parts of the Pali Canon are definitely needed in order to create the complete Buddhist wordlist from the English Pali Canon to support the learning of the religion as well as to investigate the ideology, value, and theme of the scripture.

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The Belief of the Nagas and Its Sign Creation in Poo Phayanak Shrine at the 2nd Thai - Lao Friendship Bridge in Mukdahan Province

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Abstract

This article aims to explain the creation of Naga signs in the Poo Phayanak shrine at the 2nd Thai-Lao Friendship Bridge in Muang District, Mukdahan Province. This qualitative research collected data using in-depth interviews with 17 informants: sign creators and people receiving benefits from the creation at Poo Phayanak shrine. The data collected was analyzed using content analysis. The results showed that the Naga signs are created for denotative meanings or the denotative signified. It is mutually understood that the Naga is a giant serpent with a crest on its head, believed to have supernatural powers to transform into any form. Naga signs are also created to give connotative meanings. For some groups of people, the Nagas represent (1) fear, (2) the protectors of the Mekong River, (3) success, and (4) fortunes. The meanings that are communicated in the area play a major role in increasing faith in the community and among tourists, contributing to a rising number of tourists coming to visit the shrine in Mukdahan Province.

Keywords: *Naga, belief, Naga sign, Poo Phayanak shrine, 2nd Thai-Lao Friendship Bridge.*

1. Introduction

Mukdahan is one of the provinces located in northeastern Thailand that share a border with the Lao's People's Democratic Republic (Lao PDR). Recently, there have been rapid improvements and constant economic growth in the area. The province started to see its growth in 2006 when the 2nd Thai-Lao Friendship Bridge was officially opened, resulting in the border trade value rising to 100,000 million baht. Industrial investments became the major source of the province's revenue and they have continued to grow to increase GPP.

Later in 2014, the Special Economic Zone Development Policy Committee announced the new Special Economic Zone in Mukdahan to enhance economic development for both transportation and public utilities as complied with the government policy and its potential. As a result, a lot of financial infrastructure support poured into the province to drive its economic development. While several development projects to support the SEZ were initiated, Mukdahan, as a part of the Mekong Tourism Development Zone (including Nongkhai, Nakorn Phanom, Bueng Kan, Mukdahan, and Loei), co-operated with other provinces to create a tourism development plan during 2017-2021 with the vision to create a unique lifestyle and cultural travel experience through the bridge that connects the 2 sides of the Mekong River. The plan focuses on promoting a relationship in the community along the Mekong River to develop lifestyles and cultures that bring about more quality tourist attractions and establish a travel connection with neighboring countries (Royal Thai Government Gazette, 2017). The plan was also written in response to the tourism and sports policies of Sanook Land covering 3 provinces: Sakon Nakhon, Nakhon Phanom, and Mukdahan. The aim is to present the identities of these provinces through tourism promotion and create perceptions among Thai and foreign tourists using Mukdahan Province as a hub connecting the EWEC route to the Indo-China countries. However, while the province is working on improving infrastructure to attract investments and grow more international trade, as well as implement the Lifestyles and Cultures Tourism Promotion Plan and establish a connection to Indo-China countries to serve the SEZ, operational agencies, for example, the Local

Administrative Office, temples, and the community resort to the use of the sign of Nagas depicted as mythical creatures in folklore. For example, the first story of the Naga is believed to come from southern India. According to Indian folklore, the Naga is a giant snake with a crest and is very powerful. The Naga is regarded by Indians as one of the deities. Some even say that the Nagas are Himmaman creatures. People in Southeast Asia believe that the Nagas live in the Mekong River or underwater world. Some snake-like tracks were reportedly found at the end of Buddhist Lent, the same day the Naga fireballs rose from the Mekong River. These strange tracks resembling a giant snake are believed to have been caused by the Nagas. Since then, more visitors keep coming to pay respect to the Nagas that represent the greatest power, abundance, and fortunes. They are the gods of water, and they are also compared to the rainbow bridge to the universe. Some say they are gods of the skies. Such beliefs result in different narratives about the Naga (which is basically described as a giant snake with a crest).

Signs of the Nagas have been widely reported and spread in many tourist attractions in the SEZ since the construction of the 2nd Thai-Lao Friendship Bridge. At the beginning of the construction, a strange wave was seen around the 2nd pillar of the bridge. Local people believed that it was the place where the Naga cave was located, and the wave was caused when the Naga appeared. When the bridge construction reached the middle of the river, there was an incident that prevented the construction from continuing; a crane collapsed resulting in 2 deaths, 14 injuries, and 2 missing persons. To continue the construction, both locals and related people worked together to fix the problem by following their beliefs about the Mekong River. They received advice from a medium that a shrine should be built on the riverbank near the bridge to serve as a new dwelling place for the Nagas. Then, a religious ceremony was performed to invite them to live in the shrine. After that, the construction miraculously went smoothly, and the bridge was completed as scheduled. (Puekgunsi, 2017). At the shrine, the sculptures of Phaya Anantanakarat and Phaya Srisutto were built to represent the guardians of the Mekong River. The sculpture of Vishnu or the Lord Naria sitting on Phaya Nakarat was also placed nearby for people to come and pay respect (Ampun, 2018). Since then, the shrine has gained popularity until it has become one of the main tourist destinations in Mukdahan Province. At the shrine, there are flowers, incensed sticks, and candles for those who want to pray for the Nagas and other guardian gods. Apart from this, amulets or sacred objects are available to keep as souvenirs as well. As a result, the number of visitors coming to the shrine increases every year generating more revenue for the province. Thus, this article aims to examine the Naga belief and its sign creation at Poo Phayanak shrine by reflecting on a variety of meanings expressed by the Naga signs in the place where the shrine has become one of the top tourist destinations in Mukdahan.

2. Objectives

This article aims to examine the Naga belief at Poo Phayanak shrine near the 2nd Thai-Lao Friendship Bridge in Muang district, Mukdahan Province. And to examine the Naga sign creation at Poo Phayanak shrine near the 2nd Thai-Lao Friendship Bridge in Muang district, Mukdahan Province.

2.1 Semiology

The term “Semiology” is derived from the Greek root “Semeion” meaning “sign.” Semiology involves meanings and how they are constructed, communicated, or transferred. It is a study of how “representation” constructs meaning as well as the way it allows us to understand certain things or the process of expressing meanings in which we can consider the relations of semiology with visual images and visual communications that link an identity to culture and society. Semiology, therefore, is a tool that helps us unfold and understand the process of meaning creation towards its application and its results, that is, different signs allow us to see the relations of things methodically (Kaewthep, 2004).

In this study, Roland Barthes’s (1915 -1980) semiotic theory has been adopted. Barthes was the first scholar who applied semiology to analyze things in society. His view is that everything in the current society can be interpreted as signs. Areas of society are full of middle-class mythical codes, whether found in advertisements, or the media. They not only contain literal meanings, but they also act as a channel for non-literal meanings, which can be interpreted using myths. Barthes has divided meanings into 2 categories: 1) denotation or ‘literal meaning,’ which is the signified constructed objectively and is understandable by its appearance and most people understand and accept it and 2) connotation or “hidden meaning” is the meaning

given indirectly upon an agreement made by one group or it is based on one's personal experience. In other words, it is the meaning constructed subjectively, whether it is on a personal level such as personal experience, feelings, or a social level known as "social value." These meanings are occasionally viewed as a social/cultural interpretation. They are also called the Second Order of Signification by Barthes (Kaewthep, 2004; Kaewthep, & Hinviman, 2010).

Barthes has given considerable attention to the Second Order of Signification as he believes that only connotation contains a myth. According to Barthes, it is the conceptualization of people in society towards a certain topic or thought or belief the majority of people accept without questioning and conform to the existing powers in society (Charoensinolarn, 2002) and behind the myth lies the ideological operations. This study adopts the concept of myths to analyze how the creation of the Naga signs hides the ideals of different groups of people and to investigate the process of how the Naga signs function, which is explained by the semiotic theory that every meaning is made of a 'signifier' and 'the signified.' Signifiers, in this study, can be either concrete ones or abstract ones. Concrete signifiers refer to sculptures, sacred objects, amulets, and offerings while abstract signifiers are prayers and ceremonies, which contain both literal and symbolic meanings. Moreover, this paper also attempts to examine what contributes to the creation of the Naga signs and its process.

2.2 Relevant Studies

Hongsuwan (2011) conducted the research "Sacralization of Mekong River through Folk Narratives," intending to explore the sacralization of the Mekong River through folk narratives of the Mekong communities in Tibet, China, Laos, Thailand, Cambodia, and Vietnam. The research describes sacralization made through 4 types of folk narratives. The first type describes the origin and geographical features of the Mekong as well as the belief about the river that it was created by the Lord Buddha. It is believed that the Lord Buddha had buried two footprints on the bank of the river. The second type narrates the sacred objects and places, for example, the Lord Buddha's relics, the Buddha image found under the Mekong, and the sacred rock. The third type is concerned with the sacred animals and trees, for instance, the white skin of giant catfish signifies "purity" and "cleanliness," and its eyes resemble the Lord Buddha images. Moreover, in some narratives, the tree named "Manee Kot" was brought from Heaven to Earth by Indra. The last type of narrative includes rituals and traditions such as the Lai Rue Fai Festival. At the festival, boats decorated with bright lights are floated along the Mekong to pay respect to the Lord Buddha. The Mekong is believed to connect humans with the Lord Buddha, showing how Buddhism and its integration have influenced the perceptions and beliefs of the Mekong community.

There are numerous research studies in which the meaning of Naga has been interpreted differently. Saipan (1996) studied the meanings of Naga signs observed at the Naga worship ceremony at Wat Phra That Phanom in Nakhon Phanom Province. It was found that the Naga signs have been circulated in the Mekong community in form of culture, local literature, ceremony, architecture, handicraft, and painting. The use of Naga signs and their meanings are perceived and adjusted under various circumstances. People coming from specific groups in society have different perceptions of the meaning of Naga. Social conditions also play a major role in the continuation of the ceremony, and conditions prescribed by certain groups of people are also important in preserving the ceremony as shown in the Sattanaka ceremony organized by a group of monks and a Chinese ceremonial leader, which the Naga was used as a symbol of the ceremony. The purpose was to maintain the status of an administrative group of Phra That Phanom and to respond to previous groups who had the same duties. Therefore, this reflects that ceremony is a stage for each group of power to express their identity towards others.

Chang (2017) explained that Nagas are considered the cultural symbols of Thailand and the symbols of auspiciousness for many Thais. The study results revealed that Naga worship might have already existed in Southeast Asia before the rise of Hinduism and Buddhism. Therefore, the folk narratives of Southeast Asia have been passed from generation to generation that Nagas have supernatural powers and can appear in any form, they protect humans from danger and give good fortune to the protected. However, if some people behave aggressively or show disrespect to the Nagas, they will be avenged and misfortune will be their fate. Studies regarding the Nagas above were adopted in this research to analyze the beliefs relating to the Naga signs in the area.

The Naga belief had clearly been circulated in the society from time to time until it played a major part in many ceremonial and festive events, bringing economic benefits to the local community. According to the study by Cohen (2007), it was shown that the Naga Rocket Festival has become an important event to the economy of Nong Khai Province since the festival draws more and more tourists every year. As a result, more income has been widely generated for the locals. It is reported that tourists' spending on the local economy is around 50-100 million baht, mainly small-size hotels and even hospitals. The main income generated in the community is from food and beverages sold in restaurants, local stalls, souvenirs, products sold at annual fairs, and parking fees. Therefore, income is generated throughout the community and can be accessible to the locals. The researchers applied the abovementioned study's concept to analyze the use of Naga signs in the area, which helps explain the history of Naga, the development of the belief in the area as well as the creation of Naga signs. The research framework is shown in Figure 1.

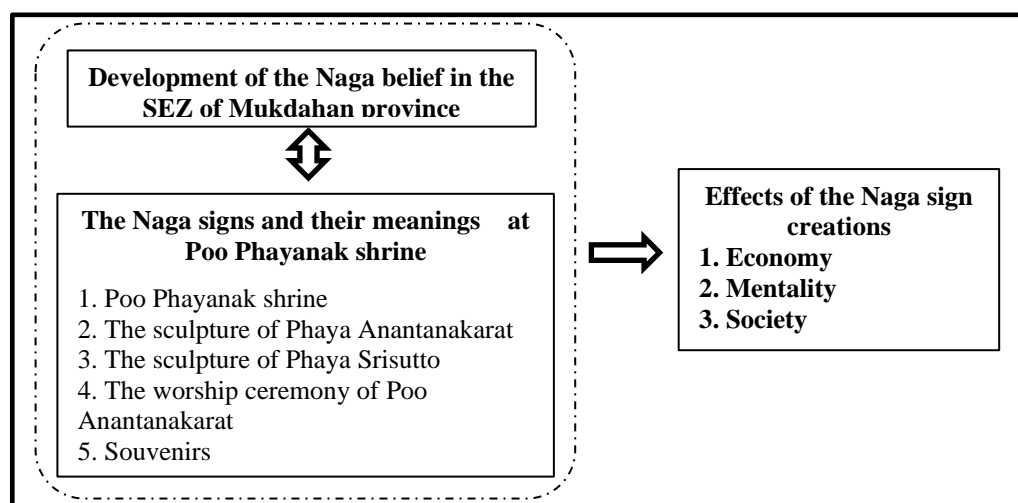


Figure 1 Research Framework

3. Materials and Methods

This article uses qualitative research methodology. Data were obtained from the Special Economic Zone (SEZ) of Mukdahan Province where Naga signs are present at the Poo Phayanak shrine located next to the Second Thai-Lao Friendship Bridge in the Muang district. Data collection tools included in-depth interviews with the Naga sign creators in the community and the people affected using such signs. The number of participants was 26 in total: 1. 15 participants consisting of community leaders and staff who manage the shrine and live in the community were chosen to identify the social and cultural context, the origin of Naga sign creation, and the guideline to the shrine management 2. Two state officials from the Department of Strategies of Mukdahan Provincial Office who assist in the shrine's activities, 3. Five locals in the community who believe in Naga and participate in the annual ceremony at the shrine 4. Four local entrepreneurs. Observation, both participant and non-participant, was also carried out along with the interviews to gain complete research results according to its objectives. For participant observation, the researchers participated in the ceremony and other activities at Poo Phayanak Shrine to understand the process of Naga sign creation, while non-participant observation was conducted to examine if the data obtained from the interviews were accurate and reliable. Observation Guideline was also implemented as a tool to collect data in which the scope was the selected area and its surrounding context, appearances of the Naga sculptures, the officials' practices towards tourists as well as how Nagas are worshipped by visitors. The data collected were brought for analysis using Content Analysis (Miles, & Huberman, 1994).

4. Results

4.1 The development of the Naga belief in the Special Economic Zone of Mukdahan Province

Mukdahan is a border province extending to the bank of the Mekong River. Therefore, people are quite influenced by the Naga belief in their way of life and Buddhism, which is widely practiced in the area. The sculptures to represent sacredness are created in the buildings influenced by Buddhist architecture such as temples, chapels, monasteries, tourist attractions as well as the government center in Mukdahan Province. This research aims to show the development of the Naga belief in Poo Phayanak shrine in Muang district, Mukdahan Province, and the economic and social effects found in the area. The development is divided into 4 phases as follows:

Phase 1 the Naga belief according to Buddhism: As Mukdahan is a province located alongside the Mekong River, the beliefs about the Nagas greatly influence the way people live in the province. On top of that, since the majority are Buddhists, the Naga belief is exclusively passed on through religious events and festivals as well as architecture found in most religious places in the province, such as temples and chapels. As the community where the Poo Phayanak shrine is located is near the Mekong River, the local people believe in the Naga, which is exclusively mentioned in Buddhism. However, there were not really strong folklore beliefs, especially about the Nagas, until the construction of the 2nd Thai-Lao Friendship Bridge began. One local said, *“...At that time, there was a temple and the Chao Poo shrine in the area. When we were about to go somewhere, we would pray and wish for a safe journey, we would do something like that. The story of the Nagas was just invented after that. But for the Naga legend, I heard parents talk about that, but no one ever claimed to see one after the bridge was built...”* Bandan (personal communication, June 7, 2019)

Phase 2 Modernization and the Naga belief: Exponential growth in the economy has been clearly seen in Mukdahan Province since 2006 when the Second Thai-Lao Friendship Bridge was opened. It was recorded that the total value of border trade dramatically increased (Mukdahan Provincial Industry Office, 2016) up to 100,000 million baht in 2012, causing economic activities to continually expand positively affecting the Gross Provincial Product (GPP) of the province. Thus, the economic growth rate has significantly increased since the bridge was officially opened. Also, as preparation for economic expansion, infrastructure was also improved. For transportation, Mukdahan Customs has installed x-ray machines for goods and improved the customs standards and regulations to meet global standards so it can become a Single Window Inspection (SWI). Besides, the customs also agreed to sign the Common Control Area (CCA) with a neighboring country, which, consequently, has become Thailand's first standardized border checkpoint to serve both goods and the public (Mukdahan Provincial Industry Office, 2016). During 2004-2010, the Naga phenomenon was circulating in the community due to the incident that occurred during the construction of the Second Thai-Lao Friendship Bridge that connects Bang Sai Yai subdistrict in Muang district of Mukdahan Province, Thailand with Savannakhet Province in Lao PDR. There were attempts from the locals to relate the Naga belief with the bridge incident. They believe that the obstacles were due to the curse of the furious Nagas as the bridge was built over their cave in the middle of the Mekong River. For example, the incident of a crane that collapsed and caused 2 deaths, 14 injuries, and 2 missing people caused the construction to be temporarily halted. The incident went viral along with the rumor saying that before the incident there was a strange wave around the 2nd pillar of the bridge assumed to be the location of the Naga's cave. The rumor was then confirmed by a medium invited to perform a forgiveness ceremony for the Nagas. He suggested that, in order to complete the construction, a shrine must be built under the bridge to resemble the place they live underwater (Puakkansi, 2017). The first phase of the shrine construction was funded by the Mukdahan Office of Highways and the Department of Public Works and Town Planning. They co-created the shrine and created the sculpture of Phaya Anantanakarat, a shining black serpent curling itself around the golden pillar and lifting its neck gracefully toward the bridge. They also placed the sculpture of Phaya Srisutto, an emerald-green serpent curling around the black pillar. Locals hold the belief that these two mighty serpents are the guardians of the Mekong River. To pay respect to the Nagas and other sacred spirits in the shrine, flowers, incense sticks, and candles are available for visitors and there are sacred objects for purchase. It is worth noticing that even though there have been attempts from the local state-run organizations to transform themselves to be more modern and convenient to serve the economic growth, the locals still use the traditional belief as a tool to promote their own community,

Phase 3 Benefits: During 2012-2018, people from government agencies, the community, and temples benefitting from the creation of the Naga signs saw the opportunity to boost their economic status

and increase their income from tourism. Consequently, more signs have been created through the renovation of religious places, architecture, and sculptures related to the Nagas: (1) the sculptures of Phaya Sisattanakarat and Phaya Petcharapatnagarakarat at Wat Dan Phra-in in Nikhom Khamsoi district, (2) the sculptures of Ong Poo and Ong Ya Nakarat, Nagi and Naga courtyard at Wat Pa Phuhang and (3) the sculpture of Phaya Nagathibodi Srisutto at Wat Woenchai in Dontan district. In the SEZ, there are attempts to create the Naga signs for tourism purposes, especially in the Pu Phayanak shrine. Apart from the architecture and sculptures of Phaya Anantanakarat and Phaya Srisutto, there is also the famous Naga worship ceremony. The 2-day-1-night ceremony annually takes place on 8-9 June and is organized by government agencies, which are the Department of Highways, the Tourism Authority of Thailand office (northeastern region), and Mukdahan Provincial Office as well as the private sector who co-host the ceremony. The worship ceremony begins with the evening chanting of the Buddha's mantra following the Baisi opening ceremony in which people bring in tributes, offerings, 9 types of sacred fruits, and Naga-shaped Baisi trays. It can be said that the ceremony is influenced by both Buddhism and Hinduism as, the next morning (June 9), merit is made, and food is offered to the monks at the site. To complete the ceremony, people will gather to float lotuses on the river to pay respect to the Nagas and Mother River. As the ceremony has enhanced economic growth in the area and generated tourism revenue, the government agencies, temples, the local community, and entrepreneurs have all benefited from it; as one of the entrepreneurs said:

"...There're lots of visitors on Saturday whether they come as group tours or sightseeing trips. They like to come here. They would buy a coffee and stuff. Our income is from selling coffee and souvenirs like glasses, beads, and bracelets which many female customers really like to buy..." Aurawan (personal communication, April 11, 2019)

The area where the Naga belief exists in the SEZ of Mukdahan Province is being developed to serve the vision of establishing "the city of trade, agriculture, Mekong tourism, and ASEAN connectivity" to encourage economic growth focusing on increasing value in the agricultural sector and supporting border trade industries and tourism as well as stimulating tourism in the places where the Naga signs have been created by the Tourism Authority of Thailand (northeastern region) and government agencies in Mukdahan Province. Such support has resulted in the increasing number of both Thais and tourists from neighboring countries (Mukdahan Provincial Office, 2018). Exponential growth is also seen in service businesses such as hotels and restaurants. A significant number of investments from foreign investors such as Chinese, Malaysians, and Icelanders (Top 3 investors) have flowed into small and medium-sized enterprises (SMEs), of which, 99.4% are invested in properties, hotels, and resorts (Department of Business Development, 2018). From the place where the Naga belief is found, money is spent by visitors on worship items like flowers, incense sticks, candles, red clothes, offering sets, Baisi trays, various types of fruits, etc. People also spend money on other things, for instance, amulets, souvenirs, and white clothing worn in a worship ceremony as told in the interview about economic benefits with one of the state officials:

"...People don't just come for the Naga; the destination of most tourists is Phra That Phanom. In the past, they might go straight to Nakhon Phanom because there were no Naga sculptures here. But we have them now so we can attract tourists, too. It's like we have a share in the tourism market..." Sommai (personal communication, June 7, 2019)

The part above is also consistent with the local people who were indirectly affected by the signs and whose benefit form of income was from trade, as seen in the interview with one of the local entrepreneurs below:

"...The existence of the Naga in the community positively affects the career of the locals, whether they are in Christian or Buddhist communities.... people gathered as a group to make Mak Beng, an offering set to the Naga. They made 200 sets on the first day and they were sold out. After that, they tried making small ones, which cost 20 baht each, and a lucky

set for 150 baht. We set the price. If it goes like this, we will make around 35,000 baht per month. But some were still left..." Chanchai (personal communication, November 11, 2019)

At the same time, each area has created various tourism activities, especially the annual Naga worship ceremony that has been promoted by the Tourism Authority of Thailand (TAT), northeastern region office. Entrepreneurs in the tourism industry such as hotels and restaurants, therefore, also benefit from such support as shown in the interview.

"...All kinds of people coming to this place. For example, those coming for blessings, if their wishes come true, they will return with donation money. They mostly come here because they are Naga believers, and they come to pray. The number of tourists usually peaks at weekends, during Songkran Festival, and Phra That Phanom worship event. Many tourists are from the northeast (Isarn), north, and central part. Most come here because they believe that the Naga can grant anything they wish for. Apart from this, foreign tourists like Chinese and Vietnamese visit the place, too. And more and more European countries come to this place as well..." Tantai (personal communication, June 8, 2019)

It was found that the Naga belief also brings social and cultural benefits that significantly help develop the Special Economic Zone of Mukdahan Province. Society has been organized and controlled through different processes that came with Buddhism, which can be reflected from activities arranged at the Naga worship ceremony that prayers always begin by praising the Lord Buddha before moving to other specific prayers. The prayer to praise the Lord Buddha begins with the verse "Namo Tassa Bhagavato Arahato Samma-Sambuddhassa." Moreover, for wishes to be granted, apart from practicing the prayers, people also have to observe the Five Precepts, which is similar to the traditional tale of Naga. In the tale, Naga was once a faithful believer in Buddhism and ultimately wished to be ordained but was unable to do so as he was an animal, not a human being. Because of this, he had to meditate and observe the precepts for him to accumulate enough good deeds to be freed from animal form (Phra Dhammakittiwong, 2005). Therefore, those Naga believers are also required to constantly make merits by donating, observing precepts, and praying before asking the Naga to grant them wishes. One of the believers said "...when we worship Naga, we need to keep our words because the Naga favors someone who strictly observes the precepts...He will grant them as wished...whether a baby, luck, or anything..." (Toiting personal communication, June 12, 2019). This is also compatible with another interviewee's statement, "...If you want to become a Naga believer, you need to keep the precepts because the Naga was a strong believer in Buddhism and wished to be ordained. He had to follow the religious rules by observing the precepts. So, those who believe in Nagas should do it, too..." Maha (personal communication, June 8, 2019). Tourists tend to feel relaxed, relieved, and hopeful after practicing prayers, especially when the ones used in the Naga worship ceremony. People feel like they are mentally healed through observing the Five Precepts. If Naga believers wish to be blessed by the Naga or wish to be bestowed merits to succeed in everything, they must keep their words and continue to observe the Five Precepts.

Phase 4 Overcoming depression: From 2019 onwards, locals and tourists posted on Facebook, one of the main social media sites, to spread negative views about the government representatives. Also, harsh words were used to criticize how tourists dress via a microphone and a speaker, harassing and frustrating many tourists. Moreover, visitors were also forced to buy flowers and incense sticks that are only available at the shrine. A series of complaints were sent to the governor of Mukdahan Province through the Damrongtham Center, as well as criticisms posted by tourists through online media about the restrictions to using the site, the administrative transparency of the site administrator, the no-donations plate removed or destroyed for the shrine to still receive more money. What is more, a sign marking the border of the shrine was used to prevent tourists from using outside services and facilities (they were not allowed to visit Phayanak Museum located next to the shrine). Such problems led to new regulations so that the administration would be transparent. New shrine committees were also appointed by people in the community (at the beginning of 2020). One of the committees commented:

“...Before this, the shrine had received lots of complaints from the tourists about the previous administrator. He had a lot of problems with tourists so new committees were appointed to create a better image to attract more tourists. The new committees selected were from people living in the community and they were approved by the province, unlike the previous administrator who was appointed by the District Office of Highways. After all the problems the DOH had, they finally decided to transfer all the responsibility to the village, for example, profits would go to the village and jobs would mainly belong to people in the community. It's unlike what they did in the past when the benefits were not shared with the community...” Tantai (personal communication, June 8, 2019)

In the case of concealing the no-donations sign, the government agencies viewed that donations are made when people have faith, so it would be very difficult to completely stop receiving them. As a result, people can donate money to the shrine, however, they will ask the representative to manage the donated money as they believe that the government sector should not be involved in this case. At present, the shrine is closed until further notice.

4.2 The creation of the Naga signs at Poo Phayanak shrine located near the 2nd Thai-Lao Friendship Bridge in Muang district, Mukdahan Province.

The signs of Naga appearing in the SEZ of Mukdahan Province are greatly influenced by folklore and legends of the past along with new signs created to increase popularity. This research presents the creation of signs at Poo Phayanak shrine, explaining a signifier and the signified that both reflect denotation and connotation as follows:

1) Poo Phayanak shrine has architecture representing a new dwelling place for the Nagas. It is one of the significant signs found in the area. The sign was created upon the medium's suggestion that is based on an abstract idea. That is, before the construction of the bridge began, the Naga spirit possessed a 5-year-old child and warned that the bridge must not be built where their cave is located. If the construction continues, it means showing disrespect to the fearsome Nagas and many people will die. After the construction began (on March 21, 2004), accidents continued to occur. In 2005, there was an accident during the construction of the 2nd Thai-Lao Friendship Bridge connecting Mukdahan Province to Savannakhet Province in Lao PDR. On the day of the accident, the water currents were extremely strong, and the gigantic cement bar being lifted by a crane was too heavy. While engineers from Thailand, Japan, and the Philippines, and workers were working on the bridge, in the middle of the Mekong River, a barge carrying the crane lost its balance and hit the sling hanging across the bridge resulting in it being cut off. The huge cement bar suddenly fell, causing 2 deaths, 14 injuries, and 2 missing persons.

After such a tragic incident, rumors about the Naga began to spread widely. One rumor was that a villager saw a small boat abandoned in the Mekong River. Seeing no owner, he and his relatives decided to go and claim the boat for personal use. After about 10 meters the boat suddenly became larger and became so large that they could not see its edge. Extremely terrified, they hurriedly rowed back to the land to save their lives. Another rumor was that some locals saw a creature near the bridge construction site. It was swimming to cross the river. What they saw above the water was the fin of a fish going upstream from Laos to Thailand and toward Pak Namhuay or the area called Huay Bansai. When they ran to get a closer look, the creature suddenly disappeared. Such rumors are believed to have put the construction on hold. Therefore, the medium advised that “a shrine for the Nagas” must be built near the construction area and a ceremony to invite them to live in a new place must be performed so that the construction could be continued. He also said that to complete the invitation process, Phrasuk, the buddha image of the Naga's daughter kept in the underwater world, had to be brought to the shrine as well. This had left people wondering where to find the Buddha image since they were not sure if it really existed. Later, a miracle happened when a fisherman pulled a fish net out of the water, and stuck in the net was a bronze Vientiane-style Buddha image, 35 centimeters in width and 70 centimeters in height, which is assumed to be Phrasuk. After such an incredible event, the medium has become very much respected by locals.

The shrine was constructed by the Department of Public Works and Town Planning and the Office of Highways in Mukdahan Province. They jointly designed and built a steady building (like the present shrine)

under the 2nd Thai-Lao Friendship Bridge to offer a new place for the Nagas, instead of the cave in the Mekong River, where the bridge was being built. However, both the medium and locals considered the Naga as, for literal meaning, a powerful creature that can cause fear to humans. A meaning hidden under the construction of the shrine is that the act of asking for forgiveness from the Naga was performed to relieve the Naga's anger to completing the construction in 2010.



Figure 2 Poo Phayanak shrine at the 2nd Thai-Lao Friendship Bridge was built due to the beliefs of people in the community.

Source: Sanook Travel, 2018.

2) Phaya Anantanakarat is the sculpture representing the Naga dwelling in the Mekong River. The sign of Phaya Anantanakarat has been used in many areas in Mukdahan by government agencies, for example, the Department of Public Works and Town Planning and the Office of Highways. The shrine's construction was funded by the Mukdahan Provincial Office. At the shrine, the sculpture of Phaya Anantanakarat whose body is covered in jet black curling around the golden pillar with his head lifting toward the Mekong River. According to Hinduism, Phaya Anantanakarat or Anantaset is considered an ancestor and the king of the Nagas because he is the first to be born as the Naga, supernaturally powerful so that he cannot be defeated by any other creatures. Thus, a sacred place should be built to respect his greatest power one of the community members said:

“...The reason why it has to be Poo Anan (Phaya Anantanakarat) is that he is the father of all Nagas. Every Naga respects him. In 2010, on the 15th day of the waxing moon on the 3rd lunar month, he came to curl around the pillar, but the Japanese did not buy such a belief, so the Naga took down the bridge. As you can see, the bridge's collapse was true...”
Saijai (personal communication, June 11, 2019)

Whilst a denotative meaning has been given to the Nagas as fearsome spirits, there has been an attempt by locals to make these water deities less fearsome by adding a connotative meaning that the Nagas are the protectors of the Mekong community. Those worshipping the Nagas with flowers, incense sticks, and candles will be protected and blessed with wealth, good fortune, and achievements.



Figure 3 The sculpture of Phaya Anantanakarat was built for people to come to pay respect at Poo Phayanak shrine at the 2nd Thai-Lao Friendship Bridge

3) Phaya Srisutto is another concrete sign built at the same time as the sculpture of Phaya Anantanakarat at Poo Phayanak shrine. The sculpture of Phaya Srisutto was designed and created by the Department of Public Works and Town Planning and the Office of Highways in Mukdahan Province. The sculpture creation was financially supported by the Mukdahan Provincial Office. People in the area hold the belief that the location of the Poo Phayanak shrine is the cave of Nagas connecting to Wang Nakin Khamchanot where they previously lived. The legend of Suvannakhomkam city (Section 72 of the Historical Records) says that Ong Indra Tiratchao or Indra created “Phromprakailok” or Wang Nakin Khamchanot as the medium for traveling between the netherworld and the human world (this place is located at the joint of Wangthong sub-district, Baan Muang sub-district and Baan Chan sub-district in Bandung district, Udonthani Province. Sri Sutto is the name of the Naga born to the Arapot family. The sculpture shows the one-headed Naga whose body is covered in emerald green with a golden head and golden belly. His body curls around the black pillar. Phaya Srisutto refers to the gatekeeper between the netherworld and the human world. He also protects the land near the Mekong River (Thailand side). Connotative meaning is also added to confirm the existence of the Nagas and Wang Nakin Khamchanot. Both denotative and connotative meanings expressed have made people believe that the netherworld and the human world exist, as one of the believers said: *“Phaya Naga living down there is Poo Srisutto. His treasure is infinite. Praying for the above power will only give you a virtue. We pray to Poo Srisutto to ask for everything we wish to have. Like what they say, properties are both on land and in water. But there is a clear boundary about ruling power. If you go to That Panom district, you must pray to Poo Dam”* Nalinee (personal communication, July 29, 2019).



Figure 4 The sculpture of Phaya Srisutto, who in the legend is believed to connect to Wang Nakin Khamchanot in Udon Thani Province, is located in front of Poo Phayanak shrine at the 2nd Thai-Lao Friendship Bridge.

4) The worship ceremony of Ong Poo Anantanakarat is considered an abstract sign. However, the ceremony performed at Poo Phayanak shrine near the 2nd Thai-Lao Friendship Bridge has become very meaningful because while the bridge was being constructed, a strange wave appeared around the bridge pillar of the 2nd Thai-Lao Friendship Bridge (Mukdahan – Savannakhet) in Bangsai sub-district in Muang district, Mukdahan Province on the night of January 31, 2010. The incident very much frightened the locals who believed that it was caused by the Naga in the Mekong River. Since then, many people have continually come to the bridge to witness what is believed to be the Naga. Some locals did not agree with the idea of building a shrine because the Naga might be angry. They opposed the idea because they believe that the Naga expresses anger by the phenomenon of the Naga playing in the water, which could cause disasters or danger to people living near the river.

On February 7, 2010 (the 8th day of the waning moon), one week after the strange wave appeared around the bridge, Mukdahan Provincial Office invited 2 mediums who were very much revered by people in the province to perform a worship ceremony to ask for forgiveness from the Nagas that are believed to be the Mekong deities. Those who try to challenge them could face serious accidents or death. People coming from different areas, whether they wanted a shrine to be built or not, crowded at the shrine to attend the ceremony. Regarding the atmosphere, the mediums brought tributes and Naga-shaped offerings properly prepared for the ceremony inherited from the ancestors. As the ceremony was being performed, rain began to drizzle. After the ceremony ended, the rain miraculously stopped. A huge wave, which looked like a creature moving under the water, appeared near the 1st pier, 5 meters to the south of the bridge several times. People at the ceremony were astonished by the phenomenon of the Naga playing in the water. They shouted with excitement when they saw the wave, making them believe that it was the Naga's movement underwater (they believe the Nagas truly exist).

The phenomenon of the Naga playing in the water in Mukdahan Province well reflects the unity of Thais and the locals flocking to the area to experience such a phenomenon, regardless of political viewpoints. They all came with the same goal, to see Phayanak. Nobody ever dares to challenge the Nagas because people are afraid that they would be endangered as narrated in the story told by their ancestors. Not only do locals living near the Mekong River believe in the Nagas, but people from many parts of the country also share the same belief. This incredible phenomenon has greatly promoted tourism and trade in the province because people not only come for the Naga phenomenon, but they also visit the Indochina Market for shopping, trade, tourism, and businesses in the area such as accommodation, restaurants, and souvenir shops to thrive.

The ceremony to worship Ong Poo Anantanakarat and Ong Ya Noi is still performed these days. Mukdahan Provincial Office announced the worship ceremony, an annual festival that takes place on June 8-9 at Poo Phayanak shrine near the 2nd Thai-Lao Friendship Bridge. The festival is co-hosted by government agencies such as the Department of Highways, the Tourism Authority of Thailand (TAT) as well as private agencies. The festival is led by the representative of the Royal Household, the governor of Mukdahan Province, and the director of TAT (northeastern region). State officials, entrepreneurs, merchants, and the public participate in this festival, too. The ceremony on the evening of June 8 includes the evening chanting and Mae Baisi opening ceremony. Locals are also encouraged to place tributes, offering sets, 9 types of fruits, and Naga-shaped Baisi trays at the ceremony. Rituals in both Buddhism and Hinduism are performed all day. The next morning (June 9), people gather to offer food to monks at the ceremonial site and the worship ceremony begins afterward. At the end of the ceremony, all the guests gather to float lotuses in the river to pay respect to the revered Nagas and Mother River. Cultural assimilation is also seen in the festival when people float the sculpture of Ganesh in the river. The ceremony lasts 2 days and 1 night.



Figure 5 The atmosphere of the annual worship ceremony taking place at Poo Phayanak shrine

It can be said that the worship ceremony of Ong Poo Phayanak and Ong Ya Naknoi is a sign that is important to government agencies and people living near the Mekong River because the ceremony is performed grandly every year, from generation to generation. The ceremony means to worship and invite Phaya Anantanakarat, the Naga families, guardian spirits, the Naga, and the Nagi to the shrine to receive tributes and offerings. The ceremony is also organized to ask for forgiveness from them and Mother River (Mekong River). For connotative meaning, people attending the ceremony wish to receive protection, blessings, happiness, and success from the Nagas. Some locals define the ceremony as a way to make them healthy, wealthy, and lucky as stated in the interview:

“... Here is the path of 5 Buddhas. No medium, no imagination. You have faith, you can ask him for anything. But you need to pray for the Lord Buddha first because he is the greatest master of all. Pray to him first so the gate will open. Luangpoo Man used to walk past this area, so the Naga took his path to come up to the human world. Why Poo Anan? He has a great relationship with Lord Narai because he is one of Lord Vishnu’s perceptions. Before the Lord Buddha reached enlightenment, he was the only god. Now Lord Buddha is the greatest, every god follows him. The creatures living in the netherworld are Buddhists. Lotuses represent the Lord Buddha, so we pray through lotuses floating in the river believed to flow down the Himalaya where the Lord Buddha lives...” Ampan (personal communication, November 8, 2019)

Apart from the outstanding sculptures of Phaya Anantanakarat and Phaya Srisutto, there are small sculptures of the Nagas for people to pay respect to. The shrine is also decorated with several Buddha images in different postures as well as other Hindu gods such as Ganesh and Brahma to increase the shrine’s sacred atmosphere. Ganesh is believed to be the god of arts and success. In the worship ceremony of the Nagas, Ganesh is also floated on the river alongside lotuses to signify achievements in everything (Ampun, 2019). The ceremony is like the Ganesh ceremony held in Turkey, the largest festival to worship Ganesh. The festival takes place in India and worldwide. At the festival, a gigantic Ganesh sculpture is built for the worship ceremony. Then, the sculpture of Ganesh is paraded around the city and led to the sacred rivers such as the Ganges and the Saraswati. Then, the ceremony is performed to release the sculpture into the river or sea. Hindus believe that a sculpture represents a god. To let the sculpture flow down the river signifies that even though Ganesh disappears people will always pray to him. Moreover, they believe that Ganesh will descend from heaven to bestow blessings upon those who pray to him (Hattapanom, 2015).



Figure 6 The sculpture of Ganesh is also placed near the shrine for people to worship.

5) Souvenirs related to the Nagas Ruenjompetch Museum are located south of Poo Phayanak shrine near the 2nd Thai-Lao Friendship Bridge. In 2016, an entrepreneur built a Thai-style house as he believed the location of the house is the gate for the Nagas to travel to the human world. He often encountered strange incidents to confirm his belief, for instance, a serpent-like track was found on the basement wall during the construction, and a few marks were seen on the land under the bridge near the Mekong River. When locals heard about them, they believed the marks were made by the Nagas. A large crowd gathered to light incense sticks and ask for good fortune as stated in the interview with the museum owner:

“...When the museum was built, I was thinking about an old memory. When I went to a cave called Nang Keaw, I saw lots of sparkling stalagmites. So, I wanted to build a place like that to give the feeling of going uphill to meet Laungpoo. The Naga legend says that the Naga wishes to be ordained. When he comes to the human world he transforms into a human. That’s why we created a sculpture of half Naga half-human wearing white clothing. I built this place based on a legend dating back to the Buddha era. Many stories try to tell people that if they believe in the Nagas, they will be protected. If people try to challenge them, they will die. Many people see it this way but here (the museum) tries to tell the story differently...”
Asawat (personal communication, 11 June 2019)

The museum is divided into 3 major rooms; a basement that represents the netherworld exhibits different shapes of stones, for example, Naga-shaped glasses and sculptures. This floor was built according to the owner’s belief. She said, “...I went to meet my boyfriend right after I finished work. Suddenly, I heard him scream loudly because the head of the Naga sculpture fell off, meaning that he was not satisfied with this head. We were very petrified, so we calmed ourselves by sitting down for a while. After that, my boyfriend started to mix cement with sawdust and mold a new head. When he finished, he called me to look at the new head. When I saw it, I was so terrified that it made me run away. The face really looked like a human face, very scary...” Usa (personal communication, June 11, 2019)

The human world (1st floor) is where souvenirs about the Nagas like accessories, stones, and beads are sold. Beverages and other items are also available on this floor. Heaven, located on the 2nd floor, shows sculptures of revered monks in Thailand, for instance, Luangpoo Man Puritatto. The sculptures of the Naga and other souvenirs are all representations of the Nagas. It is said that those having souvenirs shall be blessed. Connotative meanings that come with such products are that people who buy such souvenirs believe that they will be granted protection, career advancement, good fortune, and wealth.



Figure 7 Crystal beads, amulets, and souvenirs related to the Naga belief in Ruenjompetch Museum

5. Discussion

The development of the Naga belief in the SEZ of Mukdahan Province clearly shows the connection between the belief and ways of life of people in the Mekong community. Modernization and benefit seizing began in phases 2 and 3 when the stakeholders such as the government sector, temples, and the community used the Naga belief to create signs to represent things as well as the concrete signifiers such as different sculptures with different colors to reflect different origin and power, and amulets and offerings used in the chanting and worship ceremonies. These signs, which are considered denotations or the denotative signified created, are widely accepted and understood by most people. For example, Nagas are giant snakes with a crest on their head, mythical creatures with special powers and they can change into any form. These are the signified of the Nagas. The ceremonies related to Nagas are also considered denotations as they represent showing respect to Gods or the Nagas.

Apart from denotations, connotations or connotative signified are also created to serve specific groups upon specific agreements or personal experience, that is, the legend about the curse of the Nagas is used as a reference to reproduce the Nagas' supernatural powers in society, making the Nagas fearsome creatures for people. Besides, the presence of a Phaya Anantanakarat sculpture, one of the most revered Nagas, in a court has caused people to increasingly believe in Nagas as he is believed to be a protector of the Nagas dwelling in the Mekong. Furthermore, the sculpture of Phaya Sri Suttho was also created to emphasize the Wang Nakin Khamchanot legend that there is a connection between the underwater world and the human world. The lotus and Ganesh floating ceremonies are also held to signify the success of the Naga worship ceremony. Additionally, objects related to Nagas give connotations as these commercial objects are thought to bring auspiciousness to the owner.

It can be concluded that the Nagas used for creating signs through different representations provide various meanings that could be denotative and connotative depending on different beliefs that have been shaped through socialization, personal experiences, and perceptions. However, in the SEZ, Buddhism is the religion of most people, with some rituals conducted in Hinduism. Their lifestyles are also connected to the Mekong River. Thus, their myths could be similar or different. For the context of the SEZ, the Naga signs are created.

6. Conclusion

This research aims to study the use of the Naga belief in creating Naga signs and a variety of interpretations that appeared at Poo Phayanak shrine located near the 2nd Thai-Lao Friendship Bridge in Mueang District, Mukdahan Province. The Naga signs found in the area were created for denotation. The sculptures of Naga were created objectively, that is, to represent giant serpents. They are created with different shapes and skin colors to give connotations agreed by a group or community according to the semiotic study by Barthes (Kaewthep, 2004; Kaewthep, & Hinviman, 2010). These serpent sculptures (denotation) have different features, colors, sizes, and attires based on folk narratives in the area. They were also made highly sacred for uniqueness. For example, the sculpture of Phaya Anantanakarat was built from fear of the curse of the 2nd Thai-Lao Friendship Bridge. The Naga signs created in the area have caused changes in many dimensions. In the economic dimension, as such creations are believed to bestow good fortune and success upon people who come to pay respect to them, government agencies and the community saw the business opportunity and used the belief as a strategy to boost tourism through various activities or ceremonies. As a

result, the number of tourists has increased every year, causing service businesses, especially hotels and restaurants, to grow to the point at which they can serve all tourists and bring more revenue to the province. This finding is also consistent with Cohen's (2007) study which highlighted the importance of the Naga Rocket Festival in Nong Khai Province in terms of the local economy. It was found that the number of visitors has increased year by year contributing to income being distributed widely and directly to the community members. In the socio-cultural dimension, the Naga belief helps to organize society and keep people under social rules because the Naga folktales are related to the ways of the Mekong people in terms of agricultural rituals, art, and architecture as described in the study by Hongsuwan (2001). The study entitled "Sacralization of the Mekong through Folk Narratives" also explained that there have been attempts to make the Mekong sacred by resorting to folk narratives relating Buddhism to Nagas. Therefore, people in the community are quite familiar with the Naga worship ceremony that requires them to follow the rules. When it comes to mentality, as Naga signs represent success, people can use this free space to pray and make wishes in exchange for them having to practice the precepts, especially to refrain from intoxication and have peace of mind so that they can be hopeful and relaxed for their wishes to come true. The Naga signs created by stakeholders were also discussed in the research by Ratcharoenkachorn (1995) and are believed to reside in caves and protect the water world. Thus, it is important for people to comply with the rules regarding property use as well as try to create a pleasant landscape to make visitors aware of the Nagas' supernatural powers as narrated in some Thai folktales that the Nagas have supernatural powers and can disguise and transform into any form, to give warnings or keep humans safe from danger and bestow wealth upon people. However, if some people become aggressive or show disrespect to the Nagas, they will be met with revenge in the form of a miserable life brought by the Nagas (Chang, 2017).

The Poo Phayanak shrine at the 2nd Thai-Lao Bridge has made Nagas the signs because their folk narratives and legends are related to people's way of life. It can be said that the stakeholders including the government sector, the private sector, and the community should create representations that relate to the culture of people in the community or connect with the beliefs, folk narratives, or legends. Apart from this, signs should be created to give meanings connected to the identity of the area to boost tourism and draw tourists, contributing to increased economic benefits in the area. For further studies, it is suggested that long-term research should be carried out to investigate more the phenomenon of the Naga belief and the tourism trends after Phase 4, which involves cultivating benefits and applying economic concepts to help analyze data to better reflect the benefits of the sign creation.

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The Sub-District Learning Curriculum Development for Healthy Community Profile Management at Phrom Nimit Sub-District, Nakhon Sawan Province, Thailand

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Abstract

This research is a qualitative research study with the purpose of studying the social capital and the community potential for a healthy community profile management and also studying the guidelines for the sub-district learning curriculum development in the healthy community profile management. The lessons were learned from 9 villages by using the rapid ethnographic community assessment process (RECAP), triangulation, content analysis, and story analysis. It was found that there were 30 places which had the potential of social capital for serving as the learning resources. The potential groups and the readiness of the learning resources for the sub-district learning curriculum development were classified into 7 learning systems: (1) participatory sub-district management system (2) community welfare system (3) safety agriculture system (4) community economy system (5) community learning system (6) community healthcare system, and (7) local wisdom system. The sub-district learning curriculum for a healthy community profile management was developed with participation by using local wisdom for local development. Regarding the guidelines for the sub-district learning curriculum development for healthy community profile management, there were 5 components: Menu 1 area profile and contexts; Menu 2 area management; Menu 3 learning process; Menu 4 innovation development, and Menu 5 directions of work implementation. This study reflected on utilizing the social capital and the community potential for sub-district planning and management. The communities perceived the importance in arranging and using the data for solving problems and serving the needs of the local areas with the determination to develop people's quality of life.

Keywords: *Sub-district learning curriculum development, Healthy community profile management, Social capital and Community potential, Learning resources*

1. Introduction

Self-development for sub-district wellness occurs under the concept of concreteness pursuit from real practice in the local areas, and this is reflected in the following aspects: (1) various operational processes; (2) organizations, working teams, and stakeholders; (3) factors affecting the processes, and (4) productivity and outcomes (Thai Health Promotion Foundation, 2015; Thai Health Promotion Foundation, 2017). These aspects result in positive changes in operational methods, ways of life, family and community environment, and people's quality of life (Israel, Schulz, Parker, & Becker, 1998). Such concreteness pursuit relies on important processes to learn about the community potential by the local communities in 4 sectors: i.e., local government organizations, sub-district heads, village heads, community organizations, and local people groups to participate in thinking and implementing the activities of the communities and the local government agencies.

To drive the development and promotion of healthy community profiles to achieve the goals, the participation from related sectors is necessary (Stupplebeen, Barnett-Sherrill, & Sentell, 2019). The strategies for healthy community profile management include: (1) expansion of wisdom space and continuous knowledge development to keep up with the situations with suitability for the target groups and body of knowledge; (2) expansion of the space of participatory policy process as the policy development which is based on intelligence and participation of all sectors to gain acceptance and cooperation in practice with sustainability, and (3) expansion of social space for expanding the partner networks and causing mobilization (Andrews et al., 2013; Mauti et al., 2020).

Rapid changes due to various system reforms have effects on several developments at the community level. For example, the local government organizations are assigned with the main mission to develop the quality of life of the local people, and to provide community health services by enhancing the potential of the primary health care hospitals to be responsible for community health services with expansion to cover health

development. (Health in All Policies (HiAP) framework for country action, 2014; Shankardass et al., 2018); some communities provide opportunities for the public sector to participate in determining the public health policies. These movements signify that the local government organizations and agencies can cooperate in the community wellness development by adjusting operational methods to use the common factors for driving and complementing each other continuously (Jenkins, Fagan, Passarella, Fournakis, & Burshell, 2020).

The local organizations have had experience and lessons in responding and implementing as prescribed by law for developing the systems and supporting the practices for a good quality of life for the local people. Accordingly, the working systems occur from mutual cooperation among the local government organizations, community organizations, volunteers, and academic institutions in the communities, with the awareness that healthcare is the responsibility of everyone in those communities and societies. Therefore, healthcare is the mutual responsibility of all people. Such responsibility also includes diseases and sickness in vulnerable populations, i.e., elderly people, disabled people, and underprivileged people. Health problems and needs can be solved if healthcare is strengthened at all levels (World Health Organization, 2020; Ryus, Yang, Tsai, Meldrum, & Ngaruiya, 2021). In particular, at the community level, the implementation usually deals with health promotion, disease surveillance, disease prevention, and treatments of common diseases. As a result, community healthcare should be a mutual mission of the institutions in the communities, regardless of the community organizations, the public sector, the local government organizations, or the health service organizations (Postma, & Ramon, 2016; Luger, Hamilton, & True, 2020).

Phrom Nimit Sub-district Administrative Organization at Takhli District, Nakhon Sawan Province is a model local government organization working as a center for health community network management for cooperation in building livable communities. The center has developed lessons for self-management, and it is capable for arranging learning systems in a concrete and systematic manner for self-management. Accordingly, the data of social capital and community potential are processed and analyzed for setting working teams or learning resources according to the same concepts and goals and grouping them in the same courses or contents in the form of the sub-district learning curriculum or knowledge packages ready for educating local people, leading to healthy community profile management through community learning.

The sub-district learning curriculum for a healthy community profile management is developed from the summaries of real events or the concreteness of the operational areas through the community lessons learned and knowledge management to obtain knowledge packages, or the curriculum for encouraging and building the understanding of the local leaders, leading to a community environment setting suitable for active learning. The focus is on changing the mindset and inspiration of the local leaders in driving their local development and using the learning experience for application in other areas.

2. Objectives

This research study with the purpose to learn the lessons of social capital and health community profile. The purposes were to analyze the social capital representing the community potential for developing the sub-district learning curriculum as well as to study the guidelines for developing the sub-district learning curriculum for a healthy community profile management.

3. Materials and Methods

This research is a qualitative research study. The research procedure is described as follows.

3.1 Step 1: Documentary Research

In this step, related documents were studied in 4 main concepts: health promotion, community studies and lessons learned, analysis and uses of community data, and management of learning resources and sub-district learning centers for a healthy community development.

This research studies on the background of social capital and healthy community profile in managing community health at 4 levels which consisting of (1) human capital, (2) working groups / learning resources, (3) agencies and useful resources, and (4) self-management villages. The participation of people and agencies in the community development resulted in the forms of networks, mainstays, and activities for the healthy community profile in 7 aspects: (1) Politics and Government, (2) Society, (3) Environment Management, (4) Economy, (5) Education, (6) Health, and (7) Local wisdom.

3.2 Step 2: Field Study

The purpose of the field study was to collect the data according to the research objectives as follows.

3.2.1 Research Methodology

This study was implemented in the form of a qualitative research study with purposive conversations and in in-depth structured interviews on the topics selected in advance together with participant observations and focus group discussions.

3.2.2 Key Institutions

Purposive sampling was used to recruit the participants in 4 groups: (1) 18 key individual representatives, i.e., chief executive of the sub-district administrative organization (SAO), chief administrator of the SAO, members of the SAO, chiefs in the government agencies, sub-district heads, and village heads; (2) 7 key institution representatives, i.e., directors and teachers from schools and child development centers, directors and officers from sub-district health promoting hospitals, director of the center of non-formal education (NFE); (3) 30 core group representatives, i.e., presidents, committee members, and members of community organizations, clubs, learning resources, and local people, and (4) 5 wider interest representatives, i.e., community researchers passing through the community research skill development.

3.2.3 Research Instruments

The structured interview was used to collect the data in combination with participant observations, in-depth interviews, and focus group discussions. The instruments are described below.

1) The Rapid Ethnography Community Appraisal Program (RECAP) was used for studying the sub-district social capital (Nuntaboot et al., 2018) in 4 aspects: (1) exploration of community potential and social capital in self-management; (2) community problem analysis and solution; (3) analysis of potential in continuous and expanding development, and (4) innovation creation and development of the communities on the basis of the areas.

2) The instrument for community data analysis was used for processing and using the data about the sub-district profile and community research at Phrom Nimit Sub-District, Takhli District, Nakhon Sawan Province for developing the sub-district learning curriculum for healthy community profile management (Boonruangsak, Rujjanawarangkul, Suanjui, Yodlae, & Jaikaew, 2018).

3.2.4 Data Analysis and Validation

The researcher used content analysis, comparative analysis, and story analysis for synthesizing the conceptual framework in driving the management of the healthy community profile, analyzing social capital representing the sub-district profile and community potential, and analyzing the model of the healthy community profile management to strengthen the communities. The data were validated through triangulation by collecting data from various key informants in different periods of the data collection phase with several methods of data collection (Jenkins et al., 2020). The researcher returned the data to the key informants and related people for examination and revision before further using the revised data in the research report and the sub-district learning curriculum for community learning.

3.3 Step 3: Development of the Sub-District Learning Curriculum for Healthy Community Profile Management at Phrom Nimit Sub-District, Nakhon Sawan Province

3.3.1 Draft of the Sub-District Learning Curriculum for Healthy Community Profile Management

In this part, 2 main data sets were used as follows.

1) Structure and potential aspects of social capital related to people in the communities. If the researcher understood the community structure and potential, the study results could be analyzed more smoothly (Boonruangsak et al., 2018). Therefore, the researcher studied the aspects of social capital and the potential of the sub-district to find ways to strengthen the communities and for utilizing the core contents in the contexts of learning development in the areas with the purpose of promoting the factors useful for healthy community profile management in the area of Phrom Nimit Sub-District, Nakhon Sawan Province.

2) Important aspects of the learning centers in healthy community profile management were useful for strengthening the communities (Nuntaboot et al., 2018) in (1) building learning and understanding about the community problems and needs, (2) building mechanisms at all levels for driving implementation by communities, (3) building people for self-management, (4) building participation, (5) mobilizing funds and various resources for full utilization, (6) making agreements in the areas in terms of charters, policies, goals, and plans, and (7) having abilities to manage cooperation among different organizations.

3.3.2 Critical Analysis of the Sub-District Learning Curriculum for a Healthy Community Profile Management

The curriculum critical analysis was for considering the suitability, and the drafted curriculum was revised according to the suggestions of the experts who took operational roles in the relevant areas. There were 9 experts: 1 chief executive of the sub-district administrative organization (SAO), 1 deputy chief executive of the SAO, 1 chief administrator of the SAO, 1 sub-district head, 4 village heads, and 1 director of the sub-district health promoting hospital.

3.4 Ethics Approval

The human research ethics committee at Nakhon Sawan Province reviewed and approved this research with the approval of NSWPHO-002/64 on 5th March 2021.

4. Results

4.1 Social Capital and Community Potential in Healthy Community Profile Management

4.1.1 The Roadmap of the Sub-District Development for Healthy Community Profile Management

The representatives of leaders and local people cooperated in thinking and implementing for community development. The participation of people and agencies in the community development resulted in the forms of networks, mainstays, and activities for the healthy community profile in 7 aspects as follows.

1) Politics and government; The implementation is proactive with the focus on creating participation, creating solidarity, and developing a sustainable society under the concept of building participation and promoting aggregation. The principle of multilateral management is used in the cultural diversity through the mechanism of development plans used as guidelines for planning work, finance, people, support of resource uses in the areas, and synergy of networks and multilateral development among the public sector organizations, and various other groups with government support.

2) Society; Social welfare is arranged in a complete cycle for developing quality of life, building equality, and not being a social burden. The foundation of development is laid by raising funds in an existing form of community savings or by mobilizing stocks to promote savings for occupations or living, and alleviation of debt burdens. In addition, welfare should be arranged for members and people without ignorance of community development in education, village public activities, and maintenance of religions and cultures. Member meetings and village communities should be arranged starting from setting groups, setting, or revising regulations, and utilizing profits with transparent management for gaining people's faith in the financial organizations and making the group exist with sustainability.

3) Environment management; The environment is managed for raising people's awareness of healthcare. The food safety system is created without using chemical substances. Using chemical substances causes higher production costs so the income earned is less than using biological substances, which can be made in households and used as raw ingredients in the communities. People in the communities should pay attention to, and be aware of, health. The production cost can be reduced by using fewer chemical substances. Agriculturists should reduce their use of chemicals, and instead use bio-fermented water and granular organic fertilizers made from waste materials in the areas, villages, and households.

4) Economy; The economy is concerned with income earning, self-independence of families, and mutual assistance among group members by using knowledge from existing local wisdom and resources for the production of raw materials. This leads to income earning for the group members and people in the communities. Innovation and modern knowledge should be integrated in community learning development

without destroying the environment, and the main goals should be established for earning income for families and communities.

5) Education; A complete cycle of learning creation should be arranged for educating children, teenagers, adults, and elderly people. Well-rounded learning should be supplemented in cultural inheritance, sufficiency base, and social assistance according to the belief in principles of religions, traditions, and local wisdom. Due to cultural diversity in 4 regions, the learning creation process should be planned and managed well to reinforce lifelong learning in combination with local wisdom. Coordination with the sub-district administrative organizations should be continuous for the happy lives of people in the sub-district.

6) Health; The focus is on promoting people's wellness in body, mind, and society under the social capital resources and community ways of life. In addition, community potential should be enhanced for living together in happiness. People help each other in healthcare, the public mind is fostered, and community solidarity is reinforced for people's sustainable wellness at all levels of the individual, family, and society.

7) Local wisdom; The community learning system is driven by the community and for the community through learning process arrangements in accordance with the ways of life of people with ethnic diversity in the areas. The focus is on using information and existing learning resources for learning the uniqueness of the sub-district in education, occupation development, preservation of natural resources and environment, inheritance of cultures and traditions, and development of agricultural products on the basis of sufficiency principles.

4.1.2 Conceptual Framework for the Promotion of the Healthy Community Profile

The development of economy, society, and culture is driven for people's wellbeing, and the strength of sustainable community health (Figure 1), as detailed below.

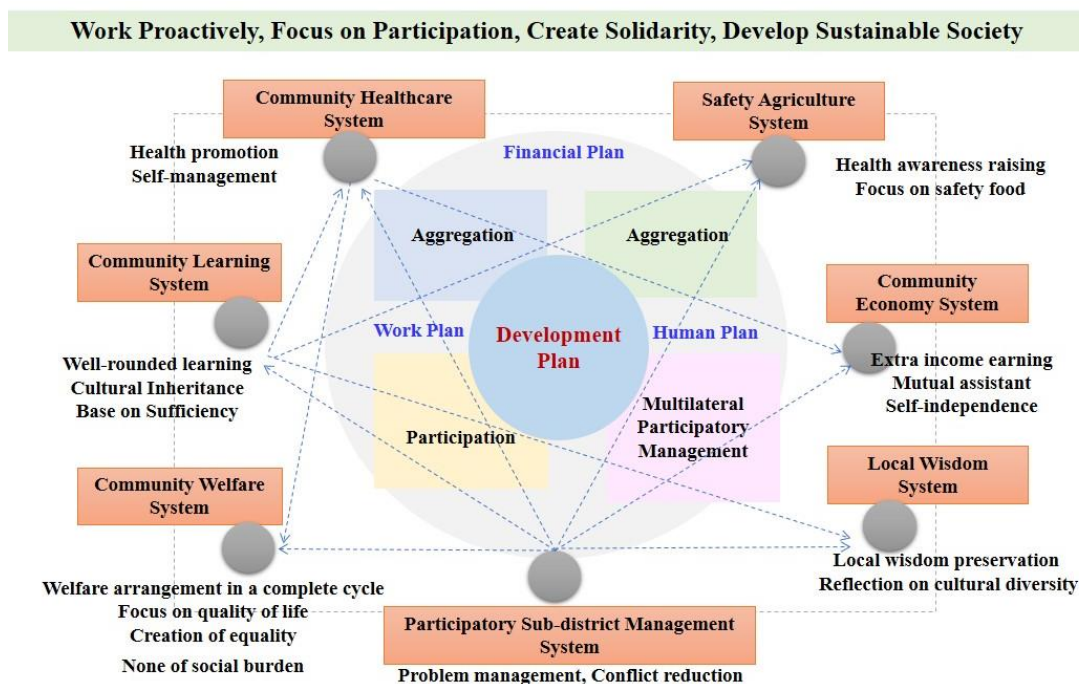


Figure 1 Conceptual framework for promotion of healthy community profile at Phrom Nimit Sub-District, Nakhon Sawan Province, Thailand.

1) Participative Management under Holistic Development; Coordination among agencies and partner organizations is necessary for effective and sustainable development. The sub-district administrative organization works as a development mechanism for supporting and linking work operation under the potential capital, situations, and people's needs as the basis for designing the development model suitable for

the areas. The focus is on self-management by using the participation process as an instrument for developing people and work, and building the public mind in working together (Kongtim, personal communication, June 11, 2021).

2) Participation and Aggregation for Solving Problems; Participative management provides opportunities for all parties in the community sector, local sector, public sector, and related government agencies to participate in development. Accordingly, problems and needs are informed, and people aggregate in groups to work together in thinking, making decisions, implementing, following up, and evaluating work. They share benefits and responsibilities according to community plans for solving problems and responding to people's needs. The management should be transparent and verifiable, and news and information are disseminated through the sub-district communication channels. The communities participate as committees for community development by using the management potential of the communities. The government agencies provide support in terms of budgets, body of knowledge, and experience of self-management of community organizations and the public sector (Fongnam, personal communication, June 11, 2021).

3) Multilateral Participatory Management; The management is in two levels. (1) Self-management by group consensus is for local officers, government agencies, and people working together to think up solutions to urgent problems and cooperating to solve such problems. (2) Community power is driven by arranging village and sub-district forums in all villages, prioritizing the problems, reflecting basic information from Open Government Data of Thailand, and surveying the sub-district data. These processes encourage participation to think and be informed about problems as well as to implement solutions together for a better quality of life with sufficient income. People are supported to become self-independent with healthy body and mind and good social welfare. Good leadership and role models can strengthen people's participation (Dithrhai, personal communication, June 25, 2021).

4) Using Local Wisdom for Local Development; Local development is based on the principles of the sufficiency economy philosophy in rationality, moderation, self-immunity, knowledge, fairness, and self-independence in living. Local wisdom is transferred by using village forums to solve the community problems. When the community is self-dependent, it can be a learning resource for transferring knowledge to other communities to learn together. It has the power to strengthen sustainable communities in matters such as sustainable agriculture and disaster management at the sub-district level, and so forth (Yamcharoen, personal communication, June 26, 2021).

4.2 Community Potential in the Sub-District Learning Curriculum Development

4.2.1 Social Capital Representing the Community Potential in a Healthy Community Profile Management

The social capital and potential at the village level were classified into (1) human capital in 246 people, (2) working groups / learning resources in 106 groups, (3) agencies and useful resources in 64 places, and (4) self-management villages in 1 village, i.e., Ban Bo Din Khao at Moo (village) 1. This village had the potential to use information for solving the community problems through self-management in savings to raise funds for occupations and public benefits. Table 1 shows the numbers for the social capital representing the community potential.

Table 1 The numbers of social capital representing the community potentials, classified according to villages (Moo)

Villages	Number of Social Capital			
	People	Working Groups/ Learning Resources	Agencies and Useful Resources	Self-Management Village
Moo 1 Ban Bo Din Kao	36	13	6	1
Moo 2 Ban Saphan Sam	25	10	4	-
Moo 3 Ban Saphan Song	20	10	6	-
Moo 4 Ban Khlong Pat	28	11	6	-
Moo 5 Ban Nong Non	20	10	4	-
Moo 6 Ban Nong Ya Rangka	26	12	11	-
Moo 7 Ban Pho Khoi	23	10	5	-

Villages	Number of Social Capital			
	People	Working Groups/ Learning Resources	Agencies and Useful Resources	Self-Management Village
Moo 8 Ban Kok Kwow	34	14	11	-
Moo 9 Ban Kai Lor	34	16	11	-
Total	246	106	64	1

4.2.2 Potential and Readiness for Development of Groups and Learning Resources

The 106 working groups / learning resources were classified into 30 learning resources according to work groups and distinctive sub-district activities with potential and readiness for being developed into learning resources with links to other groups or learning resources. These 30 learning resources were classified into 7 learning systems: (1) participatory sub-district management system in 5 learning resources, (2) community welfare system in 3 learning resources, (3) safety agriculture system in 4 learning resources, (4) community economy system in 6 learning resources, (5) community learning system in 5 learning resources, (6) community healthcare system in 2 learning resources, and (7) local wisdom system in 5 learning resources, as shown in Table 2.

Table 2 Distribution of learning resources, classified according to the learning system in each village (Moo)

Learning System	Villages / Number of Learning Resources *									Total (Resources)
	Moo 1	Moo 2	Moo 3	Moo 4	Moo 5	Moo 6	Moo 7	Moo 8	Moo 9	
1. Participatory sub-district management system	1					1			3	5
2. Community welfare system	2								1	3
3. Safety agriculture system			1		1	1		1		4
4. Community economy system	2	1						1	2	6
5. Community learning system						2			3	5
6. Community healthcare system						1			1	2
7. Local wisdom system				1			1	2	1	5
Total	5	1	1	1	1	5	1	4	11	30

* Figures in the columns show the number of learning resources in each village.

Potential and readiness for being developed into learning resources and being developed to link to other work groups or learning resources were identified in 30 learning resources. These learning resources were classified according to experts for being built as learning resources (29 resources), and those needing additional development for upgrading to be built as learning resources (1 resource), as shown in Table 3.

Table 3 Potential and readiness for development of groups and learning resources

Capital and Potential	Potential and Readiness of Learning Resources *								
	Moo 1	Moo 2	Moo 3	Moo 4	Moo 5	Moo 6	Moo 7	Moo 8	Moo 9
1. Participatory sub-district management system (5 resources)									
1. Participatory sub-district management									★
2. Prachabordi Center						★			
3. Center of legal consultant									★
4. Center of civil defense									★
5. Water user group at Bo Din Kow	★								
2. Community welfare system (3 resources)									
1. Funeral assistance group	★								
2. Elderly club									★
3. Savings group	★								

Capital and Potential	Potential and Readiness of Learning Resources *								
	Moo 1	Moo 2	Moo 3	Moo 4	Moo 5	Moo 6	Moo 7	Moo 8	Moo 9
3. Safety agriculture system (4 resources)									
1. Bio-fermented water group								★	
2. Granular organic fertilizer group						★			
3. Rice species community center			★						
4. Lemon planting in cement pond group					■				
4. Community economy system (6 resources)									
1. Quilt bag making group									▲
2. Manila tamarind group								■	
3. Pickled fish – chili sauce group	★								
4. Onion-growing agriculturist group		★							
5. Coconut broom group									★
6. Elderly group of funeral flowers									★
5. Community learning system (5 resources)									
1. Child development center									★
2. Children and youth council									★
3. Sufficiency economy learning center						★			
4. Dharma practice group (Lang Kow Temple)									★
5. Recycled waste bank group						★			
6. Community healthcare system (2 resources)									
1. Health security fund (NHSO)									★
2. Village health volunteer group (VHV)						★			
7. Local wisdom system (5 resources)									
1. Elderly group of wickerwork									★
2. Long drum group				★					
3. Local textile weaving group								★	
4. Herbal balm making group							★		
5. Herbal compress massage group								★	
Summary of the number of the learning resources according to potential and readiness						▲	1 resource		
						■	2 resources		
						★	27 resources		
						Total	30 resources		

* The symbols in the table show the potential of groups or learning resources: ★ refers to the working groups with distinctive sub-district activities with potential and readiness for being developed into learning resources with links to other groups or learning resources; ■ refers to working groups or learning resources with potential to be learning resources but lacking links to other groups or learning resources; and ▲ refers to working groups with aggregation but a lack of operational concreteness (Nuntaboot et al., 2018)

4.2.3 Potential and Readiness of Learning Resources for Sub-District Learning Curriculum Development

According to the study of community capital and potential through the community research, the potential and readiness of the learning resources in each sub-system in the sub-district learning curriculum could be classified into 7 learning systems as follows.

1) Participatory sub-district management system; The management was proactive and participatory under the cooperation of the partner organizations for developing local people's quality of life. This management focused on the coordination of the partner organizations for effective and sustainable development. In this process, the local administrative organization acted as the development mechanism to support and link all implementation under potential, situations, and needs of the people as the basis for designing the development model suitable for the areas. This system was in 5 learning resources: (1)

participatory sub-district management, (2) Prachabordi center, (3) center of legal consultant, (4) center of civil defense, and (5) water user group at Bo Din Kow.

2) Community welfare system; The system of finance and community welfare started from the local people's debt problems and informal loans. Formerly, circulating funds were not available in the community so they obtained loans from outside the community to develop their careers in the community. The community cooperated in solving such financial problems by raising funds in the form of savings or mobilizing stocks for helping local people alleviate their financial burdens in their lives and occupations. Welfare was arranged for local people and the community in terms of education, public beneficial activities, and maintenance of religions and cultures. This system was in 3 resources: (1) funeral assistance group, (2) elderly group of funeral flowers, and (3) savings group.

3) Safety agriculture system; Agriculturists at Phrom Nimit sub-districts used a lot of chemical substances so their cost was higher from using chemical fertilizers. Some of them accrued higher debts from doing agricultural work. The safety agriculture system was driven under the community potential and the existing natural resources in the community. Under the leadership of folk philosophers, the members used their knowledge for solving problems, and learned how to respond to needs based on their own experiences. In addition, they were given opportunities from various organizations to join training for developing their practical skills to be beneficial for themselves, their families, and communities. They became healthier, reduced production costs, gained more income, and reduced family expenses, leading to self-independence at the household level. This system was in 4 resources: (1) bio-fermented water group, (2) granular organic fertilizer group, (3) rice species center, and (4) lemon planting in the cement pond group.

4) Community economy system; In this system, the focus was on people's self-independence at the household level. The work process started from the aggregation of local people in responding to their income needs. Funds were raised from members to be used as the capital for the group implementation. Work was implemented according to the agreed objectives and expanded to develop products or add value to products as well as preserving local wisdom. Accordingly, economic circulation was built in the community through building extra jobs, increasing income, and disseminating local wisdom. This system was in 6 resources: (1) quilt bag making group, (2) Manila tamarind group, (3) pickled fish – chili sauce group, (4) onion growing agriculturist group, (5) coconut broom group, and (6) elderly group of funeral flowers.

5) Community learning system; With support from all sectors, learning creation was arranged for children, youths, and people in the local areas to gain vision from using local wisdom for learning creation, to develop various skills together with the communities, and to foster children and youth in terms of morals, love, and inheritance of religions and local wisdom, leadership development, and assertiveness. This system was in 5 resources: (1) child development center, (2) children and youth council, (3) sufficiency economy learning center, (4) dharma practice group (Lang Kow Temple), and (5) recycled waste bank group.

6) Community health system; This system focused on community healthcare for people in the community to take proper care of themselves. The implementation was based on arranging treatment services, educating people, and forming volunteer groups with public mind to give care to sick people in the community. The policies were set in development of public health, promotion of life quality, and equality for all people to access health services with fairness. The activities emphasized upgrading the healthy community profile in a holistic way. This system was in 2 resources: (1) health security fund (NHSO), and (2) village volunteer group (VHV).

7) Local wisdom system; Children, youths, people, folk philosophers, and elderly people gathered in groups to join activities for inheriting arts, cultures, and traditions. Their activities also included local wisdom preservation activities such as the wickerwork group, long drum group, and local textile weaving group. Local wisdom was applied and transferred to children, youths, and people in the communities. This system was in 5 resources: (1) elderly group of wickerwork, (2) long drum group, (3) local textile weaving group, (4) herbal balm making group, and (5) herbal compress massage group.

4.2.4 Community Potential in the Innovation Development for Promoting a Healthy Community Profile

The community potential can be classified into 4 aspects (Table 4) as follows.

1) Surface water supply; The surface water supply was a distinctive innovation, so the communities perceived its importance and benefits, and they approved the use of the budget of the community SML together with the budgets of the sub-district administrative organization to expand the water pipes. This was for solving the problems of budget limitations in order to build the pump house with more power for water

distribution. This project promoted the implementation and was integrated among 4 villages for using the water supply together. The water user fund was raised, the village representatives supervised water usage, and villagers recorded the amount of water used from the meters by themselves. The water supply was paid at 4 baht per unit, and some of the fees were added to the water user fund for later use in the village activities (Buakai, personal communication, July 19, 2021).

2) Good fertilizer, good soil, no longer poor (sufficiency economy learning center); This is another outstanding innovation through training and educating agriculturists, youths, and interested people. At the center, people joined the training, learned, discussed, shared knowledge, and adjusted their ideas and work methods suitable for the area potential and socio-geography. They could reduce expenses, increase income, and expand opportunities for a better quality of life in terms of economy, society, natural resources, and the environment, with balance and sustainability according to the principles of the sufficiency economy philosophy (Srisomporn, personal communication, July 21, 2021).

3) Children and youth council (Phien Nayok group); This council was established from the aggregation of local children and youths for spending free time in a useful productive way, helping society with public mind, and doing beneficial public activities. The example of such activities was cycling to clear waste in various public places such as streets, wells, ponds, and canals. They grew trees for preserving and maintaining natural resources, and they visited elderly people and local people to chat with them and help them do some housework. These activities built relationships among children, youths, adults, and local people. The activities also shaped them to have a good mind with kindness, generosity, and helpfulness; and prevented them from involvement in bad activities, drugs, or other mischief. In such activities, their awareness was fostered to become good people with ethics and morals in society (Sopa, personal communication, July 25, 2021).

4) Dharma practice group at Lang Kow Temple; The monk Bua Phaen discussed with Buddhists in the community and convinced villagers to regularly carry out religious practice at the temples on every Buddhist holy day and other important religious days. Such activities consisted of offering food to monks, listening to sermons, Brahmin ordination, keeping the precepts, and praying. On the grand Buddhist holy days on the 15th days of the waxing and waning moon of every month, the activities were to pray and worship overnight. These activities reminded the Buddhists to behave in compliance to the Buddha's teaching to obtain a peaceful mind, behave with morals and ethics, and accumulate merit as the capital to overcome suffering (Punno, personal communication, July 19, 2021).

Table 4 Innovation Development for Promoting a Healthy Community Profile

Innovation for Promoting a Healthy Community Profile	Villages / Number of Innovations									Total
	Moo 1	Moo 2	Moo 3	Moo 4	Moo 5	Moo 6	Moo 7	Moo 8	Moo 9	
1. Surface water supply	1	1	1	1						4
2. Good fertilizer, good soil, no longer poor (sufficiency economy learning center)						1				1
3. Children and youth council (Phien Nayok group)	1	1	1	1	1	1	1	1	1	9
4. Dharma practice group at Lang Kow Temple									1	1
Total	2	2	2	2	1	2	1	1	2	15

4.3 Guidelines for the Sub-District Learning Curriculum Development for Healthy Community Profile Management

4.3.1 Steps in the Sub-District Learning Development for Healthy Community Profile Management

1) Preparation of data and documents for writing the sub-district learning curriculum: The data and documents consist of (1) basic information of the sub-district such as development plans, sub-district map, and demographic data, and (2) data from the community research in capital, community potential, evolution

of problem solving, and results, potential status, and readiness for building the community learning process, and innovation for solving community problems.

2) Preparation of working team to develop the sub-district learning curriculum: The working team covers 4 main local organizations; i.e., locality, areas, organizations, and people, particularly community mainstays, folk philosophers, lecturers at the learning resources, and process managers.

3) Arrangement of workshops to develop the sub-district learning curriculum: The workshops are arranged for understanding the guidelines, importance, and processes of the sub-district learning curriculum, and for drafting the curriculum together.

4) Preparation of supporting systems for the sub-district learning: The supporting systems are important instruments for effective transferability of the curriculum. These systems include (1) learning contents about the areas, i.e., area profile, management systems, learning resource management, innovation design and development in the areas, and direction of driving the implementation of the learning resources; (2) learning media, i.e., human media, exhibitions, summaries, and illustrations; and (3) understanding of stakeholders, i.e., lecturing teams, mainstays, members, and affected people. The learning objectives and goals are explained, the information is prepared, and the transferring methods and question-and-answer sessions are rehearsed.

4.3.2 Guidelines for the Sub-District Learning Curriculum Development for Healthy Community Profile Management

The data of the sub-district healthy community profiles and community potential were processed and used for developing the sub-district learning curriculum and for serving as guidelines for arranging the community learning or learning packages (Figure 2). The components are described below.

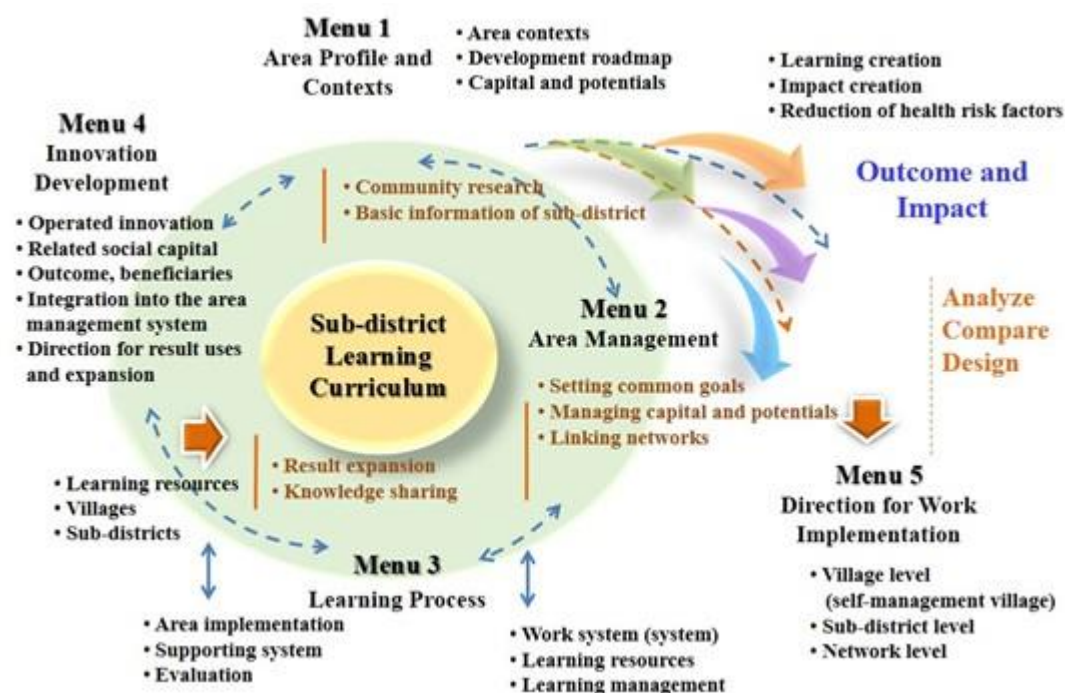


Figure 2 Guidelines for developing the sub-district learning curriculum for healthy community profile management

1) Menu 1 Area Profile and Contexts refers to the information of the area profile which represents the community capital and potential in dealing with situations or problems (Tables 1 and 2).

2) Menu 2 Area Management refers to the guidelines for managing operations in the areas to strengthen the communities, i.e., setting mutual goals for development, using capital and potential to manage crises in the areas, and linking networks (Figure 1).

3) Menu 3 Learning Process refers to the learning process designed for knowledge sharing by using the information of the areas, and social capital which can respond to normal and critical situations. This menu includes learning systems, learning resources, and self-management villages (Table 3).

4) Menu 4 Innovation Development refers to concrete development and result expansion of the area management which later become guidelines or main instruments for solving problems, and then become innovations for dealing with health risk factors and health promoting factors with the integration to routine work (Table 4).

The main mission of the sub-district administrative organization includes (1) infrastructure, (2) promotion of life quality, (3) community and social organization, (4) planning of investment and commercial promotion, (5) management of natural resources and the environment, (6) promotion of religions, arts, cultures, and local wisdom, and (7) management for supporting official operations of the government agencies and the sub-district administrative organization.

Public policies include (1) participatory community management, (2) arrangement of community welfare, (3) sustainable agriculture, (4) management of natural resources and the environment, (5) children and youth learning, (6) community healthcare by the community, (7) disaster management by the community, and (8) community investment in healthcare.

Management of health risk factors shows performance which has effects on behavioral changes in health promotion, and people in the community are healthier as a result of control of cigarette and alcohol consumption, reduction of traffic accidents, elderly care systems, warm families, management of teenagers' pregnancies, children and youth learning, caregiving for disabled and poor people, sustainable agriculture for healthy food, waste management, and disaster management.

5) Menu 5 Directions for Work Implementation refers to directions for driving work implementation at the area level, i.e., villages, sub-districts, and networks by setting goals for driving implementation and expanding the performance.

5. Discussions

5.1 Social Capital and Community Potential in Healthy Community Profile Management

5.1.1 Analysis of Links and Data Uses by the Communities for Expanding Systematic Management

The communities have leaders and mainstays with characteristics suitable for being the driving teams. Social capital is a type of capital which occurs from seeking the community potential from relationships of people in the community, cultures, traditions, beliefs, social networks, community organizations, and community leaders (Balhara, & Irvin, 2020; Goytia et al., 2013), leading to the community health promotion in 4 dimensions. At Phrom Nimit sub-district, there are learning resources for building self-independent communities. There are 30 learning resources in 9 villages, and these learning resources can drive the knowledge sharing process to make changes inside and outside the areas. In the development of the healthy community profile, the existing knowledge can be used for developing wellness of people in the communities in 5 aspects (Office of Disease Prevention and Health Promotion, 2020) of body, mind, society, intelligence, and the environment through learning activities from the community learning resources.

5.1.2 Integration of Academic Work and Public Health Work in the Communities

The concept of healthy community profile management reflects the use of social capital and community potential to integrate various work activities together, leading to analyses for planning projects and activities as well as planning for the development of people's quality of life (Committee on Educating Health Professionals, 2020). Two main components are (1) uses of capital and potential to promote specific health issues in order to integrate risk factor reduction, health promotion, and building participation in self-management of the communities, and (2) integration of work and activities of the sub-district administrative organization with those of other agencies and community organizations to find solutions for dealing with factors affecting people's living (Ramirez-Rubio et al., 2019) in terms of politics and government, societies, economy, the environment, and health according to the real needs of the communities.

5.2 Community Potential in the Sub-District Learning Curriculum Development

Comparison of the Learning Process and Self-Management of the Community under the Area Contexts.

The verification process on capital and potential in healthy community profile management and using the community data for solving problems leads to work integration among community organizations on the basis of 4 aspects: (1) area-based development, (2) consideration of health in all policies of the community, (3) participation building, and (4) ownership building.

This also includes concrete participation of different organizations in the areas to cooperate in thinking, prioritizing problems, finding solutions through different forms of forums, and expanding to develop public policies for particular issues in the areas (Kwon et al., 2012; Macassa, 2021; Mourits, van der Velden, & Molleman, 2021).

5.3 Guidelines for the Sub-District Learning Curriculum Development for Healthy Community Profile Management

Learning Management in the Areas by Using the Sub-District Learning Curriculum for Healthy Community Profile Management.

Learning management is concerned with the work and activities of the existing social capital in the communities both occurring naturally and from local wisdom which is valuable for strengthening the areas (Lenzi et al., 2020). It consists of human capital, learning resource capital, private organizations, agency capital, useful resources, and self-management villages.

In general, the sub-district learning curriculum for healthy community profile management can create learning from the communities' social capital. (1) Learning resources should be the main learning resources of the area with potential lecturers for transferring knowledge and creating learning about uniqueness and the distinction of the sub-district. (2) Learning resources for knowledge sharing concerns area-specific learning resources which create learning by developing potential and networks through experience exchanges from working together by using work concepts and methods to supplement the potential of each other (Kaplan, & Gourevitch, 2020). (3) Learning resources for visiting are the alternative resources which are useful and important places or components of the process with distinctive activities for learning creation such as the long drum group, religious places, and archeological sites, etc. (4) Self-management villages have mutual work systems to solve problems in the areas by linking to work, data, resources, and human capital (Nuntaboot et al., 2018; Boonruangsak et al., 2018)

For increasing work effectiveness and for solving the communities' problems. In general, the impacts are on changes in various dimensions according to the area contexts such as participatory management in the economy, society, environment, and health.

6. Conclusions

The sub-district learning curriculum for healthy community profile management is summarized from real incidences or working sites, and knowledge is managed in terms of contents, processes, and methods for designing learning packages. The curriculum consists of two core contents. (1) Issues of learning resource development and effects on people's quality of life are summarized in the learning packages on the topics such as community welfare, community environment management, organic agriculture, and so forth. (2) Issues of management in supportive mechanisms for learning resource management with an impact on people's living and quality of life such as searching for and using information for developing learning resources, performance development of the learning resources, fund raising and uses in the communities, management of the local administrative organization, support and reinforcement of the learning resources, and volunteer development in learning processes.

The limitation of this study was the small communities. The future potential study should include larger community to see how engagement with members of the public may be affected by a particular proposal. In addition, opportunities should be provided for various networks to share knowledge and further development the promotion of well-being and community health mechanism which integration at the local levels and using the data for solving problems and serving the needs of the local areas with the determination to develop people's quality of life.

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Analysis of Scale of Fees for Thai Justice Fund Lawyers

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Abstract

The aim of this research is to assess the current scale of fees for lawyers enlisted by the Thai Justice Fund (TJF) to assist people in need of legal aid. It began with a study of international practices that can serve as a broad guideline for further analysis. Current practices of Thai institutions providing similar services were also examined. It was found that the current scale of fees of the TJF was too extensive; the baseline fee could be expanded by around 500 to 600 percent before the upper limits were reached. This left the exact fee to be determined at the discretion of the TJF fee committee. In addition, since the fee was set ex-ante, including both professional fees and administrative expenses, it was possible that the enlisted lawyer incurred higher administrative costs than was originally envisaged. This study, therefore, proposed that the scale of fees be set according to case complexity; the administrative costs should be paid based on actual activities conducted rather than the lump-sum amount agreed upon before the commencement of legal services on behalf of the TJF.

Keywords: *Scale of fees, Legal aid, Legal fee, Economics of law, Access to justice*

1. Introduction

According to the Constitution of the Kingdom of Thailand, 2017, Section 68, Paragraph 3, “[t]he State shall provide necessary and appropriate legal aid to the poor or underprivileged in accessing justice, including the provision of lawyers,” conforming to the National Development Strategy for creating opportunities and social equality, including access to justice in all dimensions. Therefore, it can be assumed that citizens must be guaranteed the right to receive government services equally, fairly, and thoroughly, including appropriate access to justice to enable them to fight for, claim, or defend their rights fairly.

The Ministry of Justice has an important role in carrying out the mission of helping underprivileged individuals gain access to justice through the “Thai Justice Fund” (TJF). The TJF was established in accordance with the Justice Fund Act, 2015, under the Office of the Permanent Secretary, Ministry of Justice. To carry out its mission, the TJF relies on cooperation with various agencies such as the Court of Justice, litigators, law firms, and the Lawyers Council, especially in the area of hiring lawyers and setting professional fees. According to the Rules of the Justice Fund Committee on Criteria, Methods and Conditions for Helping People in Litigation, 2016, applicants seeking litigation assistance from the fund may be aided in the following ways: (1) provision of lawyer’s fees (Chapter 3, Article 9) and (2) appointment of lawyers and approval of the amount of money for hiring lawyers (Chapter 6, Lawyers Fund Part 2- Approval and Hiring of Lawyers, Article 34, Paragraph 4).

Thus, lawyers are essential to the TJF’s mission of providing effective services: helping in litigation, making applications for the provisional release of the accused, and assisting victims of human rights violations. However, the process of hiring lawyers does not have any clear guidelines. In addition, the fee rates for lawyers enlisted by the TJF are lower than the market rates for similar kinds of litigation services. According to the Justice Fund Committee Rules on the Conditions and Rates of Litigation Assistance from the Justice Fund by virtue of Section 18 (6) of the Justice Fund Act, 2015 and Article 9 of the Rules of the Justice Fund Committee on Criteria, Methods and Conditions for Helping People in Litigation, 2016, as well

as the Rules of the Justice Fund Committee on the Rules, Procedures, and Conditions for Helping People in Legal Proceedings, 2016, Article 9 (1), an enlisted lawyer shall be compensated at the following rates:

- 1) In the Court of First Instance,
 - a) Criminal cases: 5,000–50,000 Baht per case
 - b) Civil cases: 5,000–30,000 Baht per case
 - c) Administrative cases, juvenile and family cases, specialized court cases, and other cases: 5,000–20,000 Baht per case
 - d) Enforcement cases: 5,000–30,000 Baht per case
- 2) In the Appeal Court, 5,000–20,000 Baht per case
- 3) In the Supreme Court, 5,000–20,000 Baht per case

In complicated cases, lawsuits that might affect the public, group cases of 10 or more persons, or cases that might affect the confidence in the justice system, the secretary shall propose to the sub-committee for approval in the form of a fixed payment of any fees different from the aforementioned fees in (1), (2), and (3) if such payment is deemed appropriate.

From the criteria, it can be seen that the range of fees is still wide, with no consideration of the nature of the case or definition of complicated cases. Therefore, based on Section 11 (6) on collecting, analyzing, and researching information on supporting the operation of the TJF under the Justice Fund Act, 2015, the TJF deems it appropriate to conduct research on legal fees for providing legal aid from the fund. The purpose of this case study is to compare the TJF lawyer fees with the rates prevalent at various government agencies such as the Office of the Lawyer General, Court of Justice, Lawyers Council, and Rights and Liberties Protection Department. In addition, the research also seeks to study whether the scale of fees is consistent with the obligations of lawyers and types of cases, as well as study and develop a tool to track the payment of fees to TJF-enlisted lawyers, which can help ensure that the TJF continues to operate efficiently.

Literature Review on Guidelines for Setting Lawyer Fee Rates in Selected Countries

The discussion in this section is based on Holness (2014), Open Society Justice Initiative (2015), and Open Society Foundations (2019), as well as information from relevant agencies in the United Kingdom, Italy, Australia, the United States, and Canada. It was found that, in general, there are three methods for determining lawyer fees. The first method is to set a fixed rate according to the type of case. The second method is to determine the hours spent on a case. The third method is to hire lawyers to work full time and pay them a salary. In this case, the salary must be in accordance with the workload and their responsibilities. Details are shown in Table 1.

Furthermore, it is worth noting that the rates will depend on the type and complexity of the case so that they reflect the workload assigned to a lawyer, with each country having different fee levels for lawyers. For example, in the United Kingdom, the rate ranges from US\$ 783 to US\$ 939, a difference of 19.9%, while the difference is 34.3% in the United States and 312.7% in Australia. These differences depend on the cost of living and the complexity of the litigation process in each country. They also depend on the guidelines for developing the criteria for determining legal rates in each country. However, to have an appropriate lawyer's pay system, a database system on litigation and the complexity of litigation must be developed sufficiently to act as a guideline for determining the appropriate rates (Hammergren, Harvey, & Petkova, 2017). For example, in Australia, lawyers are charged based on the activities performed. The amount of time spent on each activity and the case type collectively determine the scale of fees (Legal Aid Queensland, 2020).

Table 1 Lawyer fee rates and fee payment guidelines abroad

Method for setting the fees	Country	Lawyer fee rate (USD)	Guideline for paying fees
According to the type of case	The United Kingdom	783–939	Lawyers who provide legal aid are paid a set rate for each type of case and may be paid more on an hourly basis in case there are additional procedures. For criminal cases,

Method for setting the fees	Country	Lawyer fee rate (USD)	Guideline for paying fees
			the prosecution lawyer may come from a government-funded agency and be paid a salary.
	Italy	499–1,497	Lawyers from private law firms are the ones who provide legal aid by receiving fees at the rate specified for each type of case or according to the hours worked. The court is responsible for the payment.
	Australia	441–1,820	Lawyers who work in government-funded agencies are the ones who provide legal aid. To hire a lawyer from a private law firm, fees are paid by the type of case, which has a standard rate that each state government has set according to the complexity of the case.
Hourly, according to the hours spent on the case	The United States	140–188	Each state has its own criteria for paying fees to lawyers, including government attorneys providing legal aid on a regular salary. A lawyer from a private law firm will be paid a fixed rate that has been set for each type of case based on each state's standard fee criteria.
	Canada	109.14–136.43	State lawyers are paid a salary and have certain responsibilities to fulfill and tasks to be carried out. However, lawyers from private law firms are paid based on the hours spent on a case, according to the national standard fee criteria. However, in practice, the general norm is to consider the hours required for each type of case.

Source: Summarized from Holness (2014), Open Society Justice Initiative (2015), Open Society Foundations (2019)

2. Objectives

1. To study the international practice of setting lawyers' scale of fees
2. To develop a framework for setting a standard for lawyers' scale of fees that is consistent with the nature of the workload of TJF-enlisted lawyers
3. To propose an appropriate scale of fees for TJF-enlisted lawyers, classified according to the types of cases and the workload

3. Materials and Methods

3.1 Conceptual Framework

The conceptual framework used in the study is based on the principle of equal access to justice for people in need, as shown in Figure 1. The essence of this framework focuses on reducing transaction costs for accessing justice, while ensuring that the justice system adheres to acceptable standards (Breger, 1982; United Nations Office on Drugs and Crime, 2016, 2019). For this reason, the setting of fees must take into account not only the nature and type of the case, but also the complexity of the case; only by taking these factors into consideration can the fees be reasonable enough to attract qualified lawyers who can provide legal services to fight the case as fairly as possible. This means that the fees should include both professional fees and litigation-related costs to incentivize knowledgeable lawyers to help people in need sufficiently.

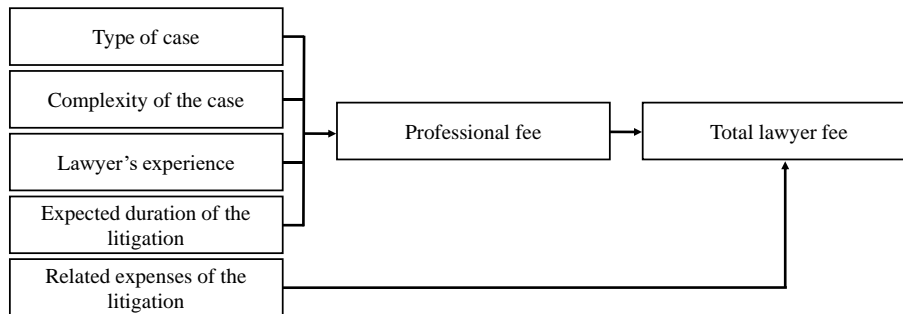


Figure 1 Conceptual framework for setting lawyers' scale of fees

3.2 Population and Sample

The study collected secondary data consisting of 1) research papers, research articles, and related academic articles; 2) documents of various agencies with similar missions; and 3) relevant statistics. This included TJF's legal aid data in fiscal year B.E. 2555–2556 (2012–2013) in each area, classified by the type of case and complexity, or cases that might affect the public, group cases of 10 or more persons, or cases that might affect the confidence in the justice system.

In addition, in-depth interviews and public hearings were also arranged. The in-depth interviews were divided into two groups: 1) the samples in Bangkok and 2) the samples in the provinces. The interviews covered practical issues related to the TJF mission, in particular the role of lawyers, including the mission to help people in litigation in accordance with the Rules of the Justice Fund Committee on Criteria, Methods and Conditions for Helping People in Litigation, B.E. 2559 (2016) and the announcement of the Justice Fund Committee on the criteria, conditions, and rates of legal aid from the TJF.

In addition, there were four focus group discussions, of which the 1st, 2nd, and 3rd meetings had more than 30 participants per session, while the 4th meeting had more than 80 participants. The participants in all four meetings consisted of representatives from agencies, including the Justice Fund Committee, Justice Fund Subcommittee, Provincial Office of the Judiciary, Office of the Lawyer General, Court of Justice, Rights and Liberties Protection Department, Lawyers Council, and Thai Bar Association, private law firms, justice system-related agencies, lawyers, academics, community justice center leaders, people who use lawyers listed on the TJF account, non-profit organizations, the media, and other stakeholders.

3.3 Data Analysis

The study employed both quantitative and qualitative data analyses. The quantitative data analysis used descriptive statistics to analyze the opinions of the participants regarding the present guidelines for fee payment. Moreover, the Fisher's Least Significant Difference (LSD) multiple comparison method was used to determine the geographical differences in lawyer fee rates. The supplementary qualitative analysis performed in this study was primarily content analysis of information obtained from the in-depth interviews with questionnaires and opinions gathered from all four meetings, which included commentary activities and collection of opinions with the help of qualitative questions.

4. Results

4.1 Guidelines for Setting Lawyer Fee Rates

According to the recommendations of participants on suitable guidelines for setting lawyer fee rates, lawyers should receive compensation at the rate specified for each type of case and may receive additional hourly compensation if there are any further procedures or depending on the complexity of the case. The recommendations are in line with the operating guidelines of relevant domestic agencies, such as the Court of Justice, Office of Rights Protection and Legal Assistance to the People, Office of the Lawyer General, and Lawyers Council under the Royal Patronage. These agencies assist people in litigation. The type of case and its nature, including penalties, are taken into consideration for setting lawyer fees. As for the expenses involved in litigation, lawyers can be reimbursed for actual costs incurred or in accordance with the official

regulations of the concerned agency. It appears that the methods used by relevant agencies for setting lawyer fees are similar both domestically and internationally. Therefore, in accordance with the results of the study, the research team came up with the following recommendations on lawyer fees that are appropriate for the TJF: 1) the fee rates should be determined according to the type of case, classified by the level of complexity; and 2) the rates should be divided into two parts: professional fees, or compensation for lawyers who work on the case, and litigation-related expenses. Lawyers can be reimbursed for the actual expenses or according to government regulations. The method of determination of lawyer fees, as suggested in this study, will incentivize qualified lawyers to offer their services and reflect the actual costs incurred in the litigation process.

4.2 Lawyer Fee Rates Classified by Types of Cases

Statistical data on cases handled by the TJF and the legal fees paid for such cases were required in order to classify the cases and analyze the actual fees paid for each type of case to determine the differences. Of the 1,546 cases examined in this study, 78.8% were civil cases, 1.7% were criminal cases, 7.4% were enforcement cases, and 12.1% were other cases in accordance with the TJF's legal aid criteria. Thus, most of the TJF-aided cases were civil cases. The TJF's legal aid criteria stipulate that if the applicant has other channels to obtain assistance, they must first use those channels because there are already other agencies providing legal aid in criminal cases. As a result, the percentage of TJF-aided criminal cases is small.

Table 2 Lawyer fee rates of the TJF in 2012–2019*

Region	Rates for civil cases (1,513 cases)				Criminal cases (33 cases)			
	Lowest	Highest	Mean	Median	Lowest	Highest	Mean	Median
Bangkok	10,000	30,000	25,462	27,000	N/A	N/A	N/A	N/A
Northern	5,000	30,000	13,590	13,000	7,000	15,000	10,666	10,000
Central	2,500	30,000	15,648	15,000	7,000	50,000	22,900	25,000
Northeastern	5,000	30,000	11,040	12,000	15,000	20,000	18,333	20,000
Southern	5,000	30,000	22,491	25,000	10,000	50,000	36,666	50,000
Total	5,000	30,000	14,926	15,000	7,000	50,000	21,512	20,000

Source: Calculated from the information provided by the TJF

Note: * The figures were adjusted by the average inflation rate to attain their 2020 value.

From the analysis of the statistical data on professional fees provided by the TJF for the fiscal years 2012–2019 for each area, a total of 1,546 cases were identified. Supplementary interviews of provincial officers revealed that the fees were set based on the potential complexity of the litigation process: 1) Low complexity, 2) Moderate complexity, and 3) High complexity. Starting with the determination of the criteria for lawyers' fees paid in cases with moderate complexity, the mean and median rates were used to determine the fee range in moderately complex cases. For example, the analysis of civil case statistics showed that the mean rate was 14,926 Baht and the median 15,000 Baht. The consultant, therefore, sets the maximum fee in moderately complex civil cases at 15,000 Baht, which is in line with the mode in that most of the time, the TJF has paid professional fees at the rate of 15,000 Baht. The next step is that the advisory panel sets the range with the standard deviation, which can be used to determine the width of each level of complexity. For example, for a type of civil case that has a standard deviation of 7,719.84 Baht, the consultant rounds off each level of complexity to be equal to 5,000 Baht in width. As a result, the professional fees in civil cases were as follows: 5,000–10,000 Baht for low complexity cases, 10,001–15,000 Baht for moderate complexity cases, and 15,001–20,000 Baht for high complexity cases.

4.3 Geographical Differences in Fee Rates

Since the original rate was fixed and the compensation for legal expenses was capped within a given range, the total payment to lawyers may not reflect the actual costs incurred. Therefore, the difference in costs incurred in each area must be investigated. Analysis of Variance (ANOVA) was performed with

supplementary analysis using the LSD method in order to demonstrate the geographical differences in fees and the variations in expenses according to the nature of the lawsuit. The findings show that lawyer fee rates vary by region, as shown in Table 3. This finding was consistent with the findings from the in-depth interviews and focus group discussions; that is, the total payment—lawyer fees, travel expenses, and other expenses related to the litigation process—received by the enlisted lawyer differs province-wise. The non-fee portion of the compensation was set based on the average cost that would be incurred in a typical case. Thus, if a case became more complex than was previously envisaged, the concerned lawyer would not be able to apply for additional coverage. These extra expenses must be paid out of the lawyer's pocket. The risk of incurring such extra expenses could discourage lawyers from undertaking TJF cases. For this reason, the total payment to lawyers should consist of two components. The first component is the professional fee that would vary depending on the type and complexity of the case. The second component is the processing costs, which will be disbursed based on the actual expenses incurred.

Table 3 Comparison of the differences between pairs of lawyer fee rates, classified by province

Province	Average	Central	Chai Nat	Nakhon Ratchasima	Chonburi	Nakhon Sawan	Nakhon Pathom
		24,840	14,411	16,885	17,812	14,990	17,736
Central	24,840	-	10,429 (0.00*)	7,955 (0.00*)	7,027 (0.00*)	9,849 (0.00*)	7,103 (0.00*)
Chai Nat	14,411	-	-	-2,473 (0.00*)	-3,401 (0.00*)	-579.26 (0.40)	-3,325 (0.00*)
Nakhon Ratchasima	16,885	-	-	-	-927 (0.17)	1,894.66 (0.02*)	-851.31 (0.28)
Chonburi	17,812	-	-	-	-	2,822.22 (0.00*)	76.25 (0.92)
Nakhon Sawan	14,990	-	-	-	-	-	-2,746 (0.02*)
Nakhon Pathom	17,736	-	-	-	-	-	-
Krabi	23,712	-	-	-	-	-	-
Phichit	10,743	-	-	-	-	-	-
Chiang Rai	12,854	-	-	-	-	-	-
Songkhla	21,948	-	-	-	-	-	-
Ubon	18,024	-	-	-	-	-	-
Ratchathani							
Pattani	15,030.57	-	-	-	-	-	-

Note: The numbers in () mean p-value * is significantly different at the 0.05% confidence level.

Table 3 Comparison of the differences between pairs of lawyer fee rates, classified by province (continued)

Province	Average	Krabi	Phichit	Chiang Rai	Songkhla	Ubon Ratchathani	Pattani	Kalasin
		23,712	10,743	12,854	21,948	18,024	15,030	7,996
Central	24,840	1,127 (0.16)	14,096 (0.00*)	11,986 (0.00*)	2,892 (0.00*)	6,816 (0.00*)	9,809 (0.00*)	16,845 (0.00*)
Chai Nat	14,411	-9,301 (0.00*)	3,667 (0.00*)	1,557 (0.10)	-7,536 (0.00*)	-3,613 (0.00*)	-619 (0.63)	6,416 (0.00*)
Nakhon Ratchasima	16,885	-6,827 (0.00*)	6,141 (0.00*)	4,030 (0.00*)	-5,063 (0.00*)	-1,139 (0.30)	1,854 (0.19)	8,890 (0.00*)
Chonburi	17,812	-5,900 (0.00*)	7,069 (0.00*)	4,958 (0.00*)	-4,135 (0.00*)	-211 (0.85)	2,782 (0.05*)	9,817 (0.00*)
Nakhon Sawan	14,990	-8,722 (0.00*)	4,246 (0.00*)	2,136 (0.05)	-6,957 (0.00*)	-3,033 (0.01*)	-40.00 (0.98)	6,994 (0.00*)

Province	Average	Krabi	Phichit	Chiang Rai	Songkhla	Ubon Ratchathani	Pattani	Kalasin
Nakhon Pathom	17,736	-5,976 (0.00*)	6,992 (0.00*)	4,882 (0.00*)	-4,211 (0.00*)	-287.85 (0.81)	2,705 (0.07)	9,741 (0.00*)
Krabi	23,712	-	12,969 (0.00*)	10,858 (0.00*)	1,764 (0.10)	5,688 (0.00*)	8,682 (0.00*)	15,717 (0.00*)
Phichit	10,743	-	-	-2,110 (0.08)	-11,204 (0.00*)	-7,280 (0.00*)	-4,287 (0.01*)	2,748 (0.00*)
Chiang Rai	12,854	-	-	-	-9,093 (0.00*)	-5170.08 (0.00*)	-2,176 (0.17)	4,859 (0.00*)
Songkhla	21,948	-	-	-	-	3,923 (0.00*)	6,918 (0.00*)	13,953 (0.00*)
Ubon Ratchathani	18,024	-	-	-	-	-	2,994 (0.07)	10,029 (0.00*)
Pattani	15,030.57	-	-	-	-	-	-	7,035 (0.00*)

Note: The numbers in () mean p-value * is significantly different at the 0.05% confidence level.

4.4 Proposed Guidelines for Setting the Scale of Fees for the TJF

Based on the literature review, domestic practices, and data analysis, this subsection proposes guidelines for setting the scale of fees for the TJF. To develop an appropriate fee structure, the following four steps should be taken:

Step 1 Classify cases according to the level of the courts, namely the Court of First Instance, the Court of Appeal, and the Supreme Court.

Step 2 Classify cases according to the type of case, consisting of criminal cases, civil cases, administrative cases, juvenile and family cases, Specialized Court cases, and other cases.

Step 3 Classify the type of cases according to the level of complexity. The criteria for consideration include the penalty, duration of litigation, prescription, and legal costs. Then, set the lawyer's rate, which would constitute the professional fee.

Step 4 Set other costs related to the litigation, such as the opportunity cost of lawyers, travel expenses, additional fees, and other expenses.

Based on the four steps discussed above, Table 4 proposes lawyer fee rates for legal aid classified by case type and case complexity.

Table 4 Proposed guidelines for setting scale of fees

Court	Type of case	Complexity of case	Other relevant costs
1) The Court of First Instance	Criminal cases	Penalties and duration of litigation	Other relevant costs (reimburse based on actual costs)
		5,000–50,000 Baht per case	Travel expenses, fees, other relevant expenses, and lawyer's additional fees, which, when combined with the rates classified by the type of case, must not exceed 50,000 Baht.
		Less than 10 years imprisonment / duration of litigation is not more than 6 months, 5,000–10,000 Baht per case	
		More than 10 years imprisonment / duration of litigation is 6 months to 1 year, 10,001–20,000 Baht per case	
		Death penalty / duration of litigation is more than 1 year, 20,001–30,000 Baht per case	

Court	Type of case	Complexity of case	Other relevant costs
	Civil cases	Prescription and fines	Other relevant costs (reimburse based on actual costs)
	5,000–30,000 Baht per case	Duration of litigation is no more than 2 years / petty case or case without capitals, 5,000–10,000 Baht per case	Travel expenses, fees, other relevant expenses, and lawyer's additional fees, which, when combined with the rates classified by the type of case, must not exceed 30,000 Baht.
		Duration of litigations 5 years / the capital is not more than 50 million Baht, 10,001–15,000 Baht per case	
		Duration of litigation is 10 years, or the capital is more than 50 million Baht, 15,001–20,000 Baht per case	
	Administrative cases, juvenile and family cases, Specialized Court cases, and other cases	Complexity of the case	Other relevant costs (reimburse based on actual costs)
	5,000–20,000 Baht per case	Low complexity, 5,000–7,500 Baht per case	Travel expenses, fees, other relevant expenses, and lawyer's additional fees, which, when combined with the rates classified by the type of case, must not exceed 20,000 Baht.
		Moderate complexity, 7,501–10,000 Baht per case	
		High complexity, 10,001–12,500 Baht per case	
	Execution cases	Complexity of the case	Other relevant costs (reimburse based on actual costs)
	5,000–30,000 Baht per case	Low complexity, 5,000–10,000 Baht per case	Travel expenses, fees, other relevant expenses, and lawyer's additional fees, which, when combined with the rates classified by the type of case, must not exceed 30,000 Baht.
		Moderate complexity, 10,001–15,000 Baht per case	
		High complexity, 15,001–20,000 Baht per case	
2) The Court of Appeal	5,000–20,000 Baht per case	5,000–7,500 Baht per case	Other relevant costs (reimburse based on actual costs), which, when combined with the lawyer's rate, must not exceed 20,000 Baht
3) The Supreme Court	5,000–20,000 Baht per case	7,500–10,000 Baht per case	Other relevant costs (reimburse based on actual costs), which, when combined with the lawyer's rate, must not exceed 20,000 Baht

5. Conclusions

This research aimed to assess the current scale of fees for lawyers enlisted by the TJF to assist people who needed legal aid. It began with a study of international practices that can serve as a broad guideline for further analysis. Current practices of Thai institutions providing similar services were also examined. It was found that the current scale of fees of the TJF was too extensive; the baseline fee could be expanded by around 500 to 600 percent before the upper limits were reached. This left the exact fee to be determined at the discretion of the TJF fee committee. In addition, since the fee was set ex-ante, including both professional fees and administrative expenses, it was possible that the enlisted lawyer incurred higher administrative costs than was originally envisaged. This study points out that in order to establish an appropriate, detailed, and proper fee structure, comprehensive information of various types of cases are necessary so as to classify the

cases by their complexity. Records of both professional fees and processing costs on a case-by-case basis are also important for in-depth analysis to determine the right professional fee rates and estimate the potential litigation costs as realistically as possible. This requires an information technology system that is capable of collecting big data and using AI to analyze the fees. Therefore, it is proposed that the Office of the TJF develop a platform to provide management services in accordance with the fund's mission of assisting people in accessing the judicial system quickly, properly, and affordably. Furthermore, it must be able to analyze data for management and policy formulation (Actionable Intelligence Policy Platform).

Recommendation 1: Build a platform to improve and monitor case statistics and related expenses and to store data in the same format. The developer of the platform should start by exploring user requirements and studying usage characteristics to design usage patterns (Interface) for the convenience of users. This can be useful to everyone including the management of the Justice Fund Office and the Ministry of Justice. This can also link to the central database of the Ministry of Justice (Data Exchange Center: DXC). There should be a guideline on collecting case statistics to make it clear that every case has to be saved on the platform and should always be kept up to date. This does not increase the burden on the concerned staff too much if it is carried out regularly.

Recommendation 2: Establish a system that keeps all the details and histories of the registered lawyers, with this system consisting of two parts as follows: 1) Online Registration Application System for Lawyers, which allows lawyers to apply for registration as a lawyer of the TJF and 2) A system for storing information on cases handled by the TJF, including details of the lawyers' background and litigation proficiency classified by the type of case.

Recommendation 3: Use Big Data and Machine Learning to help predict case complexity, set the lawyer's rate and relevant expenses, and pair cases with lawyers. The system must have information to respond to decision-making, such as the nature of litigation, the grouping of cases, and the duration of the cases.

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Ethics Position and Global Citizenship Identity of Selected First Year College Students of a Private Higher Educational Institution in Cavite

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Abstract

The purpose of this study is to determine if there is a significant relationship between the level of the ethics position and extent of global citizenship identity of selected first year College students of the Lyceum of the Philippines University Cavite. This study used two ethics positions which are idealism and relativism based on the Ethics Position Theory of Donelson Forsyth. Standardized questionnaires were utilized to measure the level of ethics position and extent of global citizenship identity, namely, the Ethics Position Questionnaire (EPQ) by Donelson Forsyth (1980) and Global Citizen Scale by Reysen and Katzarska-Miller (2013). Spearman Rank Order Correlation was used for statistical analysis of data. Findings show that both the levels of idealism and relativism have a significant relationship with the extent of global citizenship identity of the respondents. This revealed that the higher the levels of idealism and relativism are, the higher is the extent of the global citizenship identity. It is therefore recommended that higher education institutions offering the course Contemporary World should design activities and instructional strategies that will increase the level of idealism and relativism of students to effectively realize the objective of enhancing the global and cultural awareness skills of 21st Century learners.

Keywords: *ethics position, idealism, relativism, global citizenship identity, the contemporary world*

1. Introduction

The New General Education Program was approved by the Commission on Higher Education (CHED) on March 11, 2013, in accordance with the CEB Resolution No. 192-2013 in response to the changes brought by the K-12 Curriculum. This eminent reform led to the formulation of the CHED Memorandum Order No. 20 series of 2013 or the General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies. One of the provisions of this memorandum was the inclusion of a new general education course namely, *The Contemporary World*. This subject was designed to understand globalization and to prepare the students for global citizenship. Higher Education Institutions (HEIs) in the Philippines like the Lyceum of the Philippines University Cavite started to offer this last Academic Year 2018-2019 as part of the general education requirement in all collegiate programs.

Teaching this new subject becomes another academic challenge for the faculty members of different colleges and universities. Other than reasons, such as the subject has limited references, enrichment activities, and teaching materials, the instructors need to consider the readiness and attitude of the students towards the contents of the course for more effective facilitation of learning. One of the most important things to identify is the ethical point of view of the students before teaching this kind of liberal subject. In the rapid modernization and globalization, teaching world citizenship is becoming an essential part of education. It is a serious problem for college instructors if they have no idea about the potential ethical challenges and issues that can arise when teaching globalization. The affective domain of learning will be the main concern of this study because ethical positions have something to do with one's acceptability and application of knowledge. Ethics position refers to the moral judgment and behavior which can be either idealism or relativism (Forsyth, & O'Boyle Jr, 2013). On the other hand, global citizenship is defined as an idea that all persons have rights and civic responsibilities of being a member of the world, with whole-world philosophy and sensibilities, rather than a citizen of a particular nation or place (Abelos et al., 2018). Most of the recent researchers both

locally and internationally focus on the effects of the ethical climate or position to organizational citizenship behavior and human resource management (Çavuş, & Develi, 2017).

1.1 Theoretical and Conceptual Framework

Ethics Position Theory

This study used the Ethics Position Theory of Donelson Forsyth written in the Journal of Personality and Social Psychology in 1980. In this theory, he explained that there are two dimensions of an individual's moral judgment and behavior: (1) idealism and (2) relativism. The former refers to the adherence to a certain moral code or universal moral principles while the latter believes that there is no universal standard when it comes to morality (Forsyth, & O'Boyle Jr, 2013).

Using this theory, this paper has investigated if idealism and relativism has something to do with the adherence of an individual to global citizenship identity. The theory is related to globalization because one's ethical position may affect his or her point of view about the internationalization of norms, beliefs, practices and even identity.

World Culture Theory

According to Robertson (1992), World Culture Theory refers to the label wherein globalization in particular is being interpreted as the process where people are becoming conscious and understand living in this world as one place. This theory guides this study in justifying the present situation of society in developing global citizenship identity.



Figure 1 Conceptual Paradigm

Figure 1 shows how the study was conducted. The level of the ethics position of the respondents were identified by using the Ethics Position Questionnaire (EPQ) formulated by Donelson Forsyth and then followed by measuring the global citizenship identity of the respondents through the Global Citizen Scale of Reysen and Katzarska-Miller (2013). After finding the rates, the researcher correlated the two variables to test the hypotheses and make academic recommendations in teaching the Contemporary World course.

This research tried to investigate how ethics position has influenced the identification of a person as a global citizen. The emphasis of this study was about making a basis for a more critical and effective global citizenship education rather than global economics. The researcher, as a faculty member teaching social sciences and as a former chair for social sciences department of the College of Arts and Sciences of the Lyceum of the Philippines University Cavite, intended to recommend enrichment activities in teaching the course Contemporary World as well as to contribute additional knowledge in the field of social sciences. It is also necessary to realize the objective of having global and cultural awareness for the 21st century learners.

This study aimed to determine if there is a significant relationship between the ethics position and the extent of global citizenship identity of the selected first year college students of the Lyceum of the Philippines University Cavite enrolled last second semester academic year 2018-2019 and were first batch of graduates under the K-12 Curriculum. Also, it will be conducted to provide helpful guide for the instructors of the Contemporary World particularly in dealing with certain ethical issues in order to effectively teach this subject. It will also generate additional knowledge in the field of social sciences particularly in ethics, education, and globalization. The findings of the study are limited because it is based only on the result of the

survey answered by a particular number of first year students in LPU Cavite during a specific academic year, so the result of this study may not be applicable for other year levels and for those who are in other locations.

1.2 Literature Review

The Goal of K-12 Curriculum Related to Students' Ethics and Global Identity

The objectives of implementing the K-12 program include the enhancement of cultural and global awareness of the learners. Official Gazette (2013) also known as the "Enhanced Basic Education Act of 2013" provides in Section 5 (c) and (d), Curriculum Development, that the curriculum shall be culture-sensitive and be contextualized and global. One of the core courses being offered in Senior High School is Understanding Culture, Society and Politics aims to enhance students' ethical position especially on topics about culture and globalization. It is also one of salient features of the K-12 is that it is inclusive, culture responsive and culture sensitive, integrative and contextualized, relevant, and responsive. (Ocampo, 2014)

Okabe (2013) explained that the K-12 curriculum is related to the globalization of education. He writes that the world culture theory will make the educational systems of the countries to develop common global educational culture with similar values, practices, and organizations.

Ethical Challenges in Global Citizenship Education

According to Manseur (2017), the reason why global citizenship is still not given emphasis to the public sphere is because people are unaware of its importance and non-inclusion of global citizenship ethics in the instruction of social life. He argued that there must be a distinction between the interpretation of the term 'Ethic' and 'Ethics'. The first one pertains to the set of norms and standards which serve as a guide of behavior and decision making. On the other hand, ethics refers to the systematic reflections regarding the nature of morality.

In the work of Wintersteiner, Grobbauer, Diendorfer, and Reitmair-Juárez (2015) on the Global Citizenship Education Citizenship Education for Globalizing Society, it was explained that values and attitudes are major factors that can influence interpretations of problems in global society. Although globalization is rapidly realized, there are still differences among states in the interpretations of certain values. Therefore, teaching global citizenship education necessitates dialogic negotiation and communication about the different meaning of values, facts and concepts related to globalization.

There are some moral arguments which contradict the goals of globalization because it is unsuccessful to help the larger number of populations to achieve satisfaction and happiness. It is also criticized because of the exploitation of the populations for the interests of the few. Globalization is also questioned because sovereignty of states is getting lost to the point of affecting the national interests. In the ecological aspect, international community is also promoting environmental policies which may not be acceptable to some countries. The environmental ethics is also one of the essential areas in global identity. These ethical issues can also affect the attitudes of the people towards global citizenship (De Guzman et al., 2017).

There are some policy challenges that can be faced in globalization process: (1) how will its benefits be extended to all countries and people; (2) how to deal with the fear that it will only lead to instability especially of the developing countries; (3) how to deal with the negative effects of industrialization and competition; (4) how to consolidate the interest of all people and all countries; (5) how to reform financial sector in response to globalization of markets; (6) how to formulate policies that are acceptable to all; (7) how to maintain sovereignty while having intergovernmental relations; (8) how to guarantee macroeconomic stability; (9) how to promote free-trade without compromising standards and (10) how to limit governmental powers which can be abusive (Onwe, & Nwogbaga, 2014). The enumerated challenges need also to be addressed by educators in teaching global citizenship and culture. Some of the effects of the globalization may be acceptable or not for some students because of some ethical point of views. It is important to understand how to deal with these questions while teaching globalization in order to maintain an effective learning experience and environment.

International agreements, laws and standards also facilitate the issues on matters pertaining to what is 'good' and 'bad' globally. Cultural diversities also affect the shared meaning concept of global identity because trust and behavior are key factors that can cause misunderstandings and conflict (Shokef, & Erez, 2006).

Religion has the most difficult relationship with the principles of globalism. It is evident the religion focuses on the absolute standard of morality and holiness based on their respective divine writings or codes while globalism is concerned with human-made laws that can lead to the highest human material and financial satisfaction. Religious people are less concerned with wealth, however, globalism encourages people to be united for the world's wealth. Religious life promotes living not according to this world, but globalism is all about conforming to the world system. However, religious endeavors involve global scope such as world evangelization. When religious organizations conduct their missions, it is inevitable to be globally engaged. Religion therefore is both a major barrier to global citizenship and also a significant channel that empowers globalization (Claudio, & Abinales, 2018).

From the perspective of political philosophy, global citizenship building is associated with three categories: first is civic knowledge about constitutional democracy; secondly, civic skills which means intellectual and participatory skills to assist citizenship's judgment and actions; and the last category is civic virtues which refers to the liberal principles such as discipline, compassion, civility, tolerance as well as respect (Torres, 2017). These categories are actually interrelated to ethical standards of a person. This can possibly affect the attitude of an individual about issues on globalization.

Garson (2012) explained in his study that

In reviewing the literature of global citizenship education (GCE) and that of internationalization, it is possible to identify common and related themes that either implicitly or explicitly raise ethical questions for higher education as a direct result of globalization processes. As this discussion will reveal, perspective plays a large part in whether these issues are viewed as moral imperatives for humanity or the responsibility of higher education toward more immediate stakeholders. The main overlapping issues involve the increasing influence of neoliberal agendas on the conscience, capability, and context of higher education in addressing global education. Many within the academy have resigned themselves to internationalization being aligned with market outputs while at the same time individual faculty members and faculty groups manage to work innovatively within that structure to provide experiential and even transformative learning outcomes for students.

It is a challenge to promote global citizenship in some countries where identity is a very sensitive issue. National identity is believed to be threatened by globalism. Political, societal, and religious or cultural climate that is related to universal values is very critical. Like the Philippines, these concepts were embodied in the constitution specifically respect for human rights, rights and duties of citizenship as well as strengthening ethical and spiritual values through educational institutions. Policies of educational institutions help to provide openness for global citizenship education and identity (UNESCO, 2014).

Theoretical Perspectives about Ethics, Morality and Global Education Idealism and Globalization

Some scholars suggested that it is imperative for the world to develop a global ethic to solve the ethical problems experienced in globalization. This global ethic will be guided by idealism through setting universally accepted principles to properly regulate global interactions. That this global ethic is undeniably necessary to establish a set of shared ethical values and standards for the maintenance of global peace and justice (Osmiri, 2015).

Moral Relativism and Moral Objectivism

There are two related ethical theories which can affect the attitudes of the people with regard to global citizenship identity: (1) Moral Relativism and (2) Moral Objectivism. The first theory posits that no act is good or bad and there is no universal standard for evaluation of truth. The second one theorizes that moral principles and facts could apply to all regardless of differences. In the context of global citizenship identity, a person may not accept a global culture if it will be against his or her national culture. It is also a trend that relativism should be promoted to practice acceptance of global identity rather than being separatists and avoid ethnocentrism (De Guzman et al., 2017).

Cultural Relativism and Ethnocentrism

Cultural relativism and ethnocentrism are attitudes toward cultural variation. The first one means that people view behavior from the perspective of their own culture while the second one people view that one culture is superior to others (Ho et al., 2011). According to Prentka (2014), the relativism in a process of thinking plays an important role in all the processes leading to the integration of cultures, societies, countries, and economies. A pluralism of rationality, a tolerance of attitudes' diversity in experiencing another human being, ideas, values, and worldviews allows the course of globalization. Not imposing a common way of thinking in all spheres of a reality is a condition of peaceful cooperation of people. Modern people shatter the physical and mental boundaries by abandoning dogmatism, determinism of nature and social contracts. In today's global world interactions between different cultures are more and more common and cultural relativism should be used as a vessel for those interactions, through a promotion of cultural understanding. (Bojanić, 2016)

Contextual Relativism

It is effective that ethical dilemmas be addressed by a dialogue between parties instead of using universal standards. It differs from cultural relativism which believes that it is impossible to have ethical stance but only avoiding ethnocentrism. In this perspective, people need to understand the context of the behavior and deal the underlying issues and problems. Once there is an understanding of the issue or situation, then we need to determine if there will be acceptance, compromise, withdrawal, changes, and actions to practice (Flammia, 2012).

Importance of Ethical Climate in Global Citizenship Identity

According to the study made by Hyter (2014), there are four steps for responsive global engagement. The first step is global humility which refers to recognition of other values as valid beyond one's own as well as allowing one to learn from others. The next step is global awareness which is the engagement in self-reflection of one's own personal and professions assumptions that current practices could be shaped. Thirdly, global knowledge which pertains to constant effort to learn about the cultures, views, and beliefs of others. The last step is global reciprocity refers to the use of dialectical and critical thinking in negotiation of cultural differences. This framework can be also used in instructional procedures in teaching the Contemporary World. The process involves that recognition of values in order to achieve responsive global engagement. Without such the learning outcome for global education will not be totally realized.

Teaching Global Citizenship

Flammia (2012) said that it is a necessity for educators to prepare the students for the possible many challenges to be encountered concerning global citizenship. One of these challenges is the development of code of ethical behavior that can address different problems globally. There are ethical dilemmas involved in global citizenship identity such as corporate responsibility for environment, women's rights, child labor and political oppression. Universalism and cultural relativism are both significant in global society, but these are also insufficient in guiding us throughout many intercultural encounters and issues. For her contextual relativism can reconcile these two approaches to intercultural ethics.

According to *Ideas for Global Citizenship* (n.d.), global citizenship education is all about dealing with issues of interdependence, diversities, sustainability, inequities of power, resources, peace and conflict and respect. There are various teaching and learning strategies and methodologies like structured discussion, debate, role-playing, ranking exercises, and enquiries which are now established good practice in global citizenship education. It is important that the curriculum improved students' participation in order to enhance responsible citizenship and effective contributors. It is very essential that students will be encouraged to develop and express their own opinions and values about global citizenship. It requires listening and respecting other's point of view. This is a good way of improving them to make informed decisions and exercise one's rights and responsibilities to other people. It is advised that teachers at all levels should not teach global citizenship with superiority as if they know everything in the modern world. They need to lead and guide the students to search about their world for themselves, assess evidence, negotiating and working with others as well as to find solutions and informed decisions.

Synthesis

Most of the studies both locally and internationally focused on the effects of the ethical climate or position to organizational citizenship behavior and human resource management (Çavuş, & Develi, 2017). However, the literature review revealed the knowledge gap that there is a dearth in the study of identifying the connection of ethics position to the global citizenship identity of people of which this research intended to find out. The main framework to identify the ethics position in terms of idealism and relativism is to use the Ethics Position of Donelson Forsyth. Using this theory, this paper has investigated if idealism and relativism has something to do with the adherence of an individual to global citizenship identity. The theory is related to globalization because one's ethical position may affect his or her point of view about the internationalization of norms, beliefs, practices and even identity.

Ethics position is an important determinant of the global citizenship identification. Ethical issues and dilemmas are great challenges in educating people about the contemporary world. There are many perspectives about ethical position of people which can influence acceptance and rejection of the idea of global citizenship. Although, educational institutions need to give emphasis on teaching globalization, instructional materials are not only the concern but most especially the attitudes and behavior of the students towards the idea of global identity. Many studies found out that these challenges must be dealt carefully and properly so that effective instruction about this new subject is attained. Ethics position has something to do with the decision of an individual to accept knowledge and values about global identification. It is also important to consider that the newly implemented K-12 Curriculum has significant role in developing the ethical orientation of the students. Therefore, educators must pay attention in understanding the ethical stand of their students in order to prepare appropriate teaching methods, strategies, and approaches in teaching globalization.

2. Objectives

The purpose of this research is to measure the level of idealism and relativism of the selected respondents and the extent of their global citizenship identity. Moreover, this study aims to determine if there is a significant relationship between the level of the ethics position and extent of global citizenship identity.

Specifically, this study sought to answer the following questions:

- 1) What is the level of ethics position of the respondents? In terms of idealism and relativism.
- 2) What is the extent of global citizenship identity of the respondents?
- 3) Is there a significant relationship between the level of the ethics position and the extent of global citizenship identity of the respondents?

3. Materials and Methods

This study utilized quantitative research method. The correlation research was used in order to understand the relationship between the level of the ethics position and the extent of global citizenship identity of the respondents. Stratified Sampling design was used in this research. Selected first year college students of the Lyceum of the Philippines University Cavite were the respondents of this study. These students were all first batch graduated under the K-12 Curriculum in the Philippines. Using the Raosoft Survey Tools, the sample size is 322 out of the total population of 1985 students who were first year college students enrolled in the second semester Academic Year 2018-2019 in LPU-Cavite. The distribution of sample size is described below:

Table 1 Frequency Distribution of the Respondents

College	Frequency	Percentage
College of Nursing (CON)	5	1.55
College of Allied Medical Sciences (CAMS)	14	4.35
College of Arts and Sciences (CAS)	41	12.73
College of Business Administration (CBA)	63	19.56

College	Frequency	Percentage
College of Engineering, Computer Studies and Architecture (COECSA)	84	26.10
College of International Tourism and Hospitality Management (CITHM)	115	35.71
Total	322	100%

The location where the data of this study was gathered is at the Lyceum of the Philippines University Cavite specifically located at Governor's Drive, Barangay Manggahan, City of General Trias, Province of Cavite. The LPU-Cavite is known as the First and only Resort Campus in the Philippines and it is one of the campuses of the Lyceum of the Philippines University System founded by the late President Jose P. Laurel. It started to offer the general education subject The Contemporary World this Academic Year 2018-2019. Data was collected during the same semester and academic year. As LPU Cavite envisioned being an internationally accredited institution committed to innovation and excellence in the service of God and country, being globally competitive and competent are its goals. Thus, it is important that this University enhance its instruction and research about global education and identity.

The study used surveys as the primary source through the use of standardized questionnaires. There were questionnaires to identify the level of ethics position of the respondents and to measure the global citizenship identity. Secondary sources were derived from related literature and studies. The researcher requested the data through formal letter addressed to the University Registrar of the said university. This study has utilized two adopted questionnaires downloaded for free and with consent from the Measurement Instrument Database for the Social Sciences (MIDSS) (<https://www.midss.org>) to identify the ethics position and measure the global citizenship identity of the respondents. These are: (1) the Ethics Position Questionnaire (EPQ) created by Donelson Forsyth (1980); and (2) the Global Citizen Scale authored by Reysen and Katzarska-Miller (2013). The range and its descriptive interpretation were validated by two (2) experts from the academe.

The researcher used statistical treatments to treat and analyze the data gathered in the study which are frequency count and percentage to describe the gathered data, weighted mean to describe the ethics position and the extent of the global citizenship identity of the respondents and the Spearman Rank Order to correlate the level of the ethics position and the extent of global citizenship identity of the respondents. Since the three variables which are idealism, relativism, and global citizenship identity failed in the test of normality, with significant results in Shapiro-Wilk Test. Similarly, all variables failed in the Skewness and Kurtosis measurement prompting the researcher to use non-parametric test of correlation which is Spearman Rho.

4. Results and Discussion

This portion includes the presentation of the research results as well as the interpretation drawn by the researcher. The discussion also answered the research questions in the light of the results and supporting literature and relevant theories.

4.1 The Level of Ethics Position of the Respondents

It can be seen in the table below that the level of idealism of the selected first year college students have the mean of 7.61 which is interpreted as "Largely Agree". This implies that generally the respondents have a "very high" level of idealism, which means that they strongly believe that all actions should not be harmful to others at all times and must always be consistent with moral rules. On the other hand, the level of relativism of the respondents fell in 7.12 or "Moderately Agree". It signifies that the level of relativism of the respondents is "high", which means that they base their ethical choices on personal considerations and believes that there is no universal standard of morality.

Table 2 Level of Ethics Position of the Respondents in terms of Idealism and Relativism

Ethics Position	Mean	Standard Deviation	Interpretation	Overall Level
Idealism	7.61	.998	Largely Agree	Very High
Relativism	7.12	1.151	Moderately Agree	High

These findings show that the objective of the K-12 Curriculum to develop students' cultural sensitivity and global awareness are realized (R.A. 10533 Sec. 5 (c), (d)). The rating proves that the respondents, as graduates of K-12 program, have developed their ethical orientation in terms of idealism and relativism before entering in college.

Moreover, the result shows that the respondents' ethical positions are consistent with the two related ethical theories mentioned by De Guzman et al (2017) which are moral relativism and moral objectivism. Looking at the very high level of idealism of the respondents, moral objectivism is being applied where they still agree that the application of moral principles regardless of diversities is still important. Also, the high rate of relativism of the respondents proves that moral relativism is seen in the attitude of the respondents where they believe that there is no universal standard for evaluation of truth. As Flammia (2012) said that both universalism and cultural relativism are both significant in global society.

It therefore signifies that the respondents have the higher chances to accept difference through cultural and ethical relativism but at the same time still adheres to moral objectives and principles. Thus, there is a positive implication that the respondents will most likely accept the concept of global citizenship education and they can easily deal with issues of interdependence, diversities, sustainability, inequities of power, resources, peace and conflict and respect.

4.2 The Extent of Global Citizenship Identity of the Respondents

Table 3 presents the extent of global citizenship identity of the selected first year college students of the Lyceum of the Philippines University Cavite. The results show that the over-all mean is 5.76 or "Agree". It implies therefore that the respondents who were K-12 graduates have "high" extent of global citizenship identity which means that they are very aware and embrace cultural diversity and global identity while promoting social justice and sustainability with a sense of responsibility.

Table 3 Extent of Global Citizenship Identity of the Respondents

Global Citizenship Identity	Mean	Standard Deviation	Interpretation	Overall Extent
Extent of Global Citizenship Identity	5.76	.788	Agree	High

Thus, Okabe (2013) is correct in saying that the K-12 curriculum is related to the globalization of education and that the world culture theory will make the educational systems of the countries to develop common global educational culture with similar values, practices, and organizations. With the high extent of global citizenship identity of the respondents, it can be easier for them to accept the concept of globalism and other related topics in globalization. The result also implies that the respondents have already an understanding and positive attitude towards global citizenship.

4.3 Correlation between the level of Idealism and Extent of Global Citizenship Identity of the Respondents

The table above reveals the result of spearman rank correlation which showed that there is a significant relationship between idealism and global citizenship identity ($r=.133$, $p<.05$). So, the null hypothesis is rejected. This signifies that the level of idealism is strongly correlated to the measured extent of the global citizenship identity of the respondents. Therefore, it can be interpreted that as the level of idealism of the respondents increases, the extent of the global citizenship identity of the respondents also increases.

Table 4 Correlation between the level of Idealism and Extent of Global Citizenship Identity of the Respondents

Variables	Statistical Treatment	value	p-value	Interpretation
Idealism	Spearman's Rho	.133*	.017	Reject Ho
Global Citizenship Identity	Spearman's Rho	.133*	.017	

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

It is important to note that the relationship between idealism and global citizenship identity can give us the idea that believing in a set of a universally accepted moral principle will help in managing global interactions through developing the concept of a global ethic. And this global ethic is undeniably necessary to establish a set of shared ethical values and standards for the maintenance of global peace and justice (Osmiri, 2015). Maximizing this relationship between idealism and global identity, global citizenship education can be easily imparted among people. Moreover, educators can develop a strategy to use the potential of ethical views of idealism in promoting global citizenship.

4.4. Correlation between the level of Relativism and Extent of Global Citizenship Identity of the Respondents

The result of spearman rank correlation in the above table showed that there is a significant relationship between idealism and global citizenship identity ($r=.137$, $p<.05$). Hence, the null hypothesis is rejected. This means that the level of relativism is strongly correlated to the extent of the global citizenship identity of the respondents. Hence, as the level of relativism of the respondents becomes higher, the extent of the global citizenship identity of the respondents also gets higher

Table 5 Correlation between the level of Relativism and Extent of Global Citizenship Identity of the Respondents

Variables	Statistical Treatment	value	p-value	Interpretation
Relativism	Spearman's Rho	.137*	.014	Reject Ho
Global Citizenship Identity	Spearman's Rho	.137*	.014	

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

The findings signify that the respondents' ethical position of relativism increase their acceptance and sense of identity as a global citizen. This implies that educators need to be educated on how to introduce global citizenship to the students by dealing carefully on different ethical positions. Relativism can also affect the global identification of an individual because culture varies from different countries and parts of those cultures are ethical standards and moral principles. Also, Hyter (2014) is right in suggesting that global knowledge which pertains to constant effort to learn about the cultures, views and beliefs of others is necessary to develop a more responsive global engagement.

5. Conclusion

In summary, this study determined the level of ethics position and the extent of the global citizenship identity of the selected first year college students of LPU Cavite. The result shows that the respondents have very high idealism and high relativism. Also, based on the findings, the respondents have high extent of global citizenship identity. The correlation test revealed that both the levels of idealism and relativism have significant relationship with the extent global citizenship identity of the respondents. Thus, the study assumed that the higher the levels of idealism and relativism are, the higher will be the extent of the global citizenship identity. It is therefore recommended that higher education institutions offering the course Contemporary World should design activities and instructional strategies that will increase the level of idealism and relativism of students to effectively realize the objective of enhancing the global and cultural awareness skills of the 21st Century learners.

The researcher would like to suggest the following for further enhancement of the findings of this study:

1. Conduct a qualitative study on the same topic to support the quantitative analysis of this research if future research may wish to use the findings of this study.

2. A test should also be conducted with other groups of respondents to see whether the result of this study will be also consistent with others; and
3. An output such as an intervention or enhancement program in teaching the course the Contemporary World.

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APPENDIX A

RANGSIT JOURNAL OF SOCIAL SCIENCES AND HUMANITIES (RJSH)

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APPENDIX B

RANGSIT JOURNAL OF SOCIAL SCIENCES AND HUMANITIES (RJSH)

NOTE FOR AUTHORS

1. Aims and Scope

Rangsit Journal of Social Sciences and Humanities (RJSH) aims to provide a high profile vehicle for publication of various new issues in different academic areas in Humanities and Social Sciences. *RJSH* invites scholars, researchers, professionals and academicians to publish their manuscripts in the journal. The scope of the Journal encompasses, the author(s) can submit their manuscript covering, but not limited to Interdisciplinary Studies in Humanities and Social Sciences, any of the following areas:

Social Science

Anthropology
Criminology & Criminal Justice
Economics
Political Science
Sociology

Humanity

History
Linguistics
Philosophy (inc. Arts & Design)

2. Submission Deadline

Submissions are to be permanently open. A manuscript submitted between July 1st and December 31st will be considered for publication in the January-June Issue of the subsequent year whereas a manuscript submitted between January 1st and June 30th will be considered for publication in the July-December Issue.

3. Categories of Articles

The *Journal* accepts the following types of articles:

1. **Research Articles:** A research article is a regular quantitative or qualitative article which aims to present new findings or interpretations.
2. **Review Articles:** A **review article** or survey articles, also called a literature review, is an article that survey of previously published research on a topic an summarizes the current state of understanding on a topic. It should give an overview of current thinking on the theme and, unlike an original research article, won't present new experimental results. By analyzing a large body of data from existing studies, some systematic reviews can come to new conclusions. Review articles can also provide recommendations for potential research areas to explore next. Moreover, a review article surveys and summarizes previously published studies, rather than reporting new facts or analysis.
3. **Innovations:** An innovation is an article that aims to present creative arts and designs, procedures or devices.

Research articles, review articles, and innovations should not exceed 15 pages of standard A4 paper using *RJSH* format. The manuscript template is available at <https://rjsh.rsu.ac.th>. All categories of articles must coincide with manuscript preparation instruction (see Manuscript Preparation Section).

4. Editorial Policies

RJSH accepts only the original work that has not been previously published, nor is it a dual submission. The submission also implies that the authors have already obtained all necessary permissions for the inclusion of

copyrighted materials, such as figures and tables from other publications. Submitting a copied piece of writing as one's own original work is considered plagiarism. The *Journal* is published by Rangsit University Press, Thailand. Contributions are in English. Copyright is by the publisher and the authors.

Authorship: *RJSH* expects that all of the authors listed on a manuscript have contributed substantially to the submitted paper. By submission of the manuscript, cover letter, and Copyright Transfer Agreement (CTA), the corresponding author affirms that all named authors have agreed to be listed as authors of the paper. Furthermore, by their signatures on the CTA, all authors affirm that they have both read and approved the manuscript, and that they take full responsibility for the content of the article.

Review Process: *RJSH* assumes responsibility for insuring that submitted manuscripts receive expert and unbiased reviews. *RJSH* strives to complete a peer review of all submitted papers and the publication of accepted manuscripts in a timely manner and to keep the authors informed of any problems with their manuscript. All submitted manuscripts are initially evaluated by the Editor-in-Chief in consultation with members of the Editorial Board before being sent for double-blind review. *RJSH* is under no obligation to submit every manuscript to formal peer review. Manuscripts that are judged by the editors to be inferior or inappropriate for publication in the *Journal* may, at the discretion of the Editor-in-Chief, be rejected without formal written reviews by referees. *RJSH* attempts to obtain at least two written reviews for each manuscript that is entered into the peer review process, although the Editor-in-Chief has the discretion to make final decisions about the disposition of a manuscript with fewer than two reviews. The reviewers' evaluations will be used by the editors to decide whether the paper should be accepted, revised or rejected. A copy of the referees' comments will be sent to the corresponding authors whose paper needs revision. All reviewers serve anonymously and their identities are protected by the confidentiality policy of *RJSH*.

Confidentiality: As is customary for the peer review process, *RJSH* holds the identity of authors and the contents of all submitted manuscripts in confidence until such time as the papers are published. This confidentiality extends to the comments of editors and reviewers that have evaluated the paper; these comments and reviews are released only to the corresponding author. Co-authors may have access to these documents either by obtaining them directly from the corresponding author or by submitting to *RJSH* a letter of request that has been signed by the corresponding author. Similarly, *RJSH* expects that editors and reviewers will maintain strict confidentiality of the authors' identities and the contents of manuscripts that they examine during the review process, and furthermore, will never disclose the contents (either orally or in writing) of documents related to the peer review of a manuscript. A violation of this policy is considered a serious breach of trust.

Research Involving Animals or Humans: Authors must state in the manuscript that the work was approved by, at least, their institutional ethical review board for any research involving human and animal subjects. These approvals are required for publication in *RJSH*.

5. Manuscript Preparation

General Instruction: Submit your manuscript in both PDF and MS word formats. Manuscripts are acceptable in both US and UK English, but the use of either must be consistent throughout the manuscript. Please note that the editors reserve the right to adjust style to certain standards of uniformity.

Format: Unless specified, type text with 10-point Times New Roman font on 12-point line spacing, with a 1.25 inch left margin, 1 inch bottom and right margin, 2 inch top margin, 1.2 inch header, and 0.6 inch footer. Main text is set in single column. First lines of paragraphs are indented 0.5 inch. For hard copy, use standard A4 paper, one side only. Use ordinary upper- and lower-case letters throughout, except where italics are required. For titles, section headings and subheadings, tables, figure captions, and authors' names in the text and reference list: use ordinary upper- and lower-case letters throughout. Start headings at the left margin. If you wish, you may indicate ranking of complicated section headings and subheadings with numerals (1, 1.1, 1.1.1). Try not to exceed three ranks. All pages must be numbered in the top right-hand corner.

Title: Use 11-point bold font on 12-point line spacing. The length of the title of the article must not exceed 2 lines. A title should be concise and informative. The alignment of the title is centered.

Author Names: Use 10-point font on 11-point line spacing. Centered alignment and leave one line space below the title of the article. Begin with the first name of the author followed by the last name. For more than one author, separate each name by a comma (,), and identify each author's affiliation by superscript numbers at the end of the author's last name.

Author Affiliations: Use 9-point font on 10-point line spacing. Centered alignment and leave one line space below the author names. Include institutional and e-mail addresses for all authors. Place superscript numbers at the beginning of each affiliation accordingly.

Abstract: Use 10-point font on 11-point line spacing for heading and 9-point font on 11-point line spacing for abstract content. An abstract of up to 250 words must be included as and when appropriate. For research papers; the purpose and setting of the research, the principal findings and major conclusions, and the paper's contribution to knowledge should be briefly stated. For empirical papers the locations of the study should be clearly stated, as should the methods and nature of the sample, and a summary of the findings and conclusion. Please note that excessive statistical details should be avoided, abbreviations/acronyms used only if essential or firmly established.

Keywords: List up to 6 keywords and separate each keyword by a comma (,). The keywords should accurately reflect the content of the article. The keywords will be used for indexing purposes.

Main Text: Use 10-point font on 12-point line spacing. In the main body of the submitted manuscript the following order should be adhered to: introduction, methodology, results (if any), discussion (if any), conclusion, acknowledgements, and references. Please note that some article categories may not contain all components above. Tables or figures must be included in the text for the reviewing process. In addition, tables and figures must also be submitted individually in separate files. Refer in the text to each table or illustration included, and cite them in numerical order, checking before submission that all are cited and in correct sequence.

References in the Text: To insert a citation in the text use the author-year system, i.e., the author's last name and year of publication. Examples are as follows: "Since Johnson (2008) has shown that..." or "This is in agreement with results obtained later (Benjamin, 2010)". For 2-3 authors; all authors are to be listed, with "and" separating the last two authors, for more than three authors, list the first author followed by et al. The list of references should be arranged alphabetically by authors' names. All in-text citation must be appeared in the reference list. The manuscript should be carefully checked to ensure that the spelling of authors' names and dates are exactly the same in the text as in the reference list. Responsibility for the accuracy of bibliographic citations lies entirely with the author(s). Citation of a reference as "in press" implies that the item has been accepted for publication. Authors are responsible for the accuracy of the content of the references.

List of References: *RJSH* uses the American Psychological Association (APA) referencing style, details of which can be found at <http://www.apastyle.org/>. References should be listed at the end of article, arranged alphabetically according to the last names of the authors and then chronologically. The following are examples of the APA referencing style. All in-text citation must be appeared in the reference list and all publications in the reference list must correspond to the in-text citation. Please delete the listed publications which are not appeared in the context.

Abstracts

Author./ (Year of publication)./Title of Abstract (abstract)./Journal Title,/Volume(Issue),/Page number.

Example:

Clark, D. V., Hausen, P. H., & Mammen, M. P. (2002). Impact of dengue in Thailand at the family and population levels (abstract).*Am J Trop Med Hyg*, 67(2 Suppl), 239.

Books

Author./ (Year of publication)./Book Title:/Capital letter also for subtitle./Edition (if any)./Location,/Country :/Publisher.

Example:

Cochrane, A. (2007). *Understanding urban policy: A critical approach*. Malden, MA: Blackwell Publishing.

Palmer, G. R., & Short, S. D. (2010). *Health care and public policy: An Australian analysis* (4th ed.). South Yarra, VIC: Palgrave Macmillan.

Bulliet, R. W., Crossley, P. K., Headrick, D. R., Hirsch, S. W., Johnson, L. L., & Northrup, D. (2011). *The earth and its peoples: A global history* (5th ed.). Boston, MA: Wadsworth.

Chapter in edited book

Richards, K. C. (1997). Views on globalization. In H. L. Vivaldi (Ed.), *Australia in a global world* (pp. 29-43). North Ryde, Australia: Century.

Article or Chapter in an Edited Book

Author./ (Year of publication)./ Title of chapter./ In/ Editor/(Ed.),/ *Book Title*/(pages of chapter)./ Location:/ Publisher.

Example:

O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: A metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), *Gender issues across the life cycle* (pp. 107-123). New York, NY: Springer.

Conference and Seminar Proceedings

To cite proceedings that are published regularly, use the same format as for a journal article. To cite proceedings that are published in book form, use the same format as for an article in a book.

Example:

Tester, J. W. (2008). The future of geothermal energy as a major global energy supplier. *Proceedings of the Sir Mark Oliphant International Frontiers of Science and Technology Australian Geothermal Energy Conference*, Canberra, Australia: Geoscience Australia. Retrieved from http://www.ga.gov.au/image_cache/GA11825.pdf

Dissertation or Thesis

Author./ (Year of publication)./ *Title of dissertation or thesis* /(Doctoral dissertation or Master's thesis)./ Awarding Institution.

Example:

Norasingha, A. (2009). *Expression and distribution of mucorinic receptors in hepatic composite of the cirrhotic rat* (Master's thesis). Rangsit University, Pathum Thani.

Editorials

Author./ (Year of publication)./ Title of Editorial (editorial)./ *Journal Title*,/ Volume(Issue),/ Page numbers.

Example:

Fisher, R. I. (2003). Immunotherapy in Non-Hodgkin's lymphoma: Treatment advances (editorial). *Semin Oncol*, 30(2Suppl 4), 1-2.

Journal Articles

Author./ (Year of publication)./ Article Title./ *Journal Title*,/ Volume(Issue),/ Page numbers.

Example:

Leelawat, S., Leelawat, K., Narong, S., & Matangkasombut, O. (2010). The dual effects of delta 9-tetrahydrocannabinol on cholangiocarcinoma cells: Anti-invasion activity at low concentration and apoptosis induction at high concentration. *Cancer Investigation*, 28(4), 357-363.

Polk, A., Amsden, B., Scarrtt, D., Gonzal, A., Oknamefe, O., & Goosen, M. (1994). Oral delivery in aquaculture. *Aquacult. Eng*, 13, 311-323.

Seals, D. R., & Tanaka, H. (2000). Manuscript peer review: A helpful checklist for students and novice referees. *Advances in Physiology Education*, 23(1), 52-58.

Srichandum, S. & Rujiranyong, T. (2010). Production scheduling for dispatching ready mixed concrete trucks using bee colony optimization. *American J. of Engineering and Applied Sciences*, 3(1), 823-830.

Letters

Author./ (Year of publication)./ Title of Letter./ *Journal Title*./ Volume(Issue)./ Page number.

Example:

Enzensberger, W., & Fisher, P. A. (1996). Metronome in Parkinson's disease (letter). *Lancet*, 347, 1337.

Notes

Author./ (Year of publication)./ Title of Note./ *Journal Title*./ Volume(Issue)./ Page number.

Example:

Haier, R. J., Schroeder, D. H., Tang, C., Head, K., & Colom, R. (2010). Gray matter correlates of cognitive ability tests used for vocational guidance. *Biomed Central*, 3, 206.

Unpublished/In Press Articles

Author./ (In press Year)./ Article Title./ *Journal Title*./ (in press).

Example:

Veena, B. (2004). Economic pursuits and strategies of survival among Damor of Rajasthan. *J Hum Ecol.* (in press).

Internet periodicals

Author./ (Year of publication)./ Article Title./ *Journal Title*./ Volume(issue)./ page numbers./ Retrieved mm dd, year, from the full URL of the web page

Example:

Adams, P. J. (2000). Australian economic history. *Journal of Australian Economics*, 5(2), 117-132.
Retrieved June 12, 2001, from <http://jae.org/articles.html>

Internet non-periodicals

Author./ (Year of publication)./ Article Title./ Retrieved mm dd, year, from the full URL of the web page

Example:

Lemire, D. (n.d.). *Write good papers*. Retrieved July 1, 2010, from <http://www.daniel-lemire.com/blog/rules-to-write-a-good-research-paper>

Newspaper retrieved from a database

Article – with an author

Author./ (mm dd, Year)./ Article Title./ *News agency*./ Retrieved from the full URL of the web page

Example:

Darby, A. (August 20, 2002). Rarest tiger skin a rugged survivor. *Sydney Morning Herald*. Retrieved from <http://www.smh.com.au>

Article – without an author

Article Title./ (mm dd, Year)./ *News agency*./ Retrieved from the full URL of the web page

Example:

Rarest tiger skin a rugged survivor. (August 20, 2002). *Sydney Morning Herald*. Retrieved from <http://www.smh.com.au>

Illustrations and Figures: All illustrations should be provided in a file format and resolution suitable for reproduction, e.g., EPS, JPEG or TIFF formats, without retouching. Photographs, charts and diagrams should be referred to as "Figure(s)" and should be numbered consecutively in the order to which they are referred.

In addition to placing figures with figure captions into the main text, **submit each figure individually as a separate file.**

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Tables: Tables must be cell-based without vertical lines. They should be produced in a spreadsheet program such as Microsoft Excel or in Microsoft Word. Type all text in tables using 9-point font or less. Type the caption above the table to the same width as the table. Insert tables and table captions into the main text. Tables should be numbered consecutively. Footnotes to tables should be typed below the table and should be referred to by superscript numbers. Submit separate files of tables in their original file format and not as graphic files in addition to incorporating in the main text. Tables should not duplicate results presented elsewhere in the manuscript (e.g., in graphs).

Proofs: Proofs will be sent to the corresponding author by PDF wherever possible and should be returned within 1 week of receipt, preferably by e-mail. Corrections must be restricted to typesetting errors. It is important to ensure that all of your corrections are returned to us in one all-inclusive e-mail or fax. Proofreading is solely the responsibility of the author(s). Note that *RJSH* may proceed with the publication of your article if no response is received in time.

Reprints: Authors will receive free copy of the journal in which their work appears.

English Language Editing before Submission: Authors for whom English is a second language may choose to have their manuscript professionally edited before submission.

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Manuscripts should be submitted electronically to the Editor-in-Chief as an attachment via the *RJSH* submission system, in word processing format. The *RJSH* submission form must be completed. Included in the submission form are (a) the title and authors, (b) complete contact information for the corresponding author (mailing address, e-mail address, and telephone and fax numbers), (c) confirmation of the originality of the reported work, (d) approval of the submitted version of the manuscript by all authors, and (e) the authors' consent for publication in *RJSH*, if accepted. The submission form is available at <https://rjsh.rsu.ac.th>.

7. Manuscript Revision and Re-submission

There are four editorial decisions: Accept, Accept with Minor Revision, Resubmit with Major Revision, and Reject. A Reject decision is definitive and authors may not submit a new version of the manuscript to the *RJSH*. A Resubmit with Major Revision requires a major re-write of the manuscript and/or inclusion of significant new data, and thus the creation of a new manuscript, which will thus be assigned a new submission date. An Accept with Minor Revision decision implies that the paper can, in principle, attain the required standard of the *Journal* without major change. Editors may or may not have a revised manuscript reviewed (generally, by the original reviewers), in order to ascertain whether changes to the original manuscript adequately responded to the criticisms. If changes made do not result in a paper of the required standard, the

revised manuscript will be definitively rejected. If a revised manuscript of "Accept with Minor Revision" is accepted, the original submission date will be retained.

8. Copyright Agreement

Once a manuscript is accepted for publication, authors will be required to sign a Copyright Transfer Agreement form (CTA). CTA is available at <https://rjsh.rsu.ac.th>. Signature of the CTA is a condition of publication and papers will not be passed for production unless a signed form has been received. Please note that signature of the Copyright Transfer Agreement does not affect ownership of copyright in the material. Please submit the completed form with the final version of the manuscript back to the *RJSH* submission system.

9. Further Reading

The following resources will provide valuable guidelines for the preparation of manuscripts.

Anonymous. (n.d.). How to write abstract. Retrieved January 17, 2011, from

http://www.journal.au.edu/au techno/2006/jan06/vol9num3_howto.pdf

Anonymous. (n.d.). How to write an abstract: Links and tips. Retrieved January 17, 2011, from

<http://research.berkeley.edu/ucday/abstract.html>

Koopman, P. (n.d.). How to write an abstract. Retrieved January 17, 2011, from

<http://www.ece.cmu.edu/~koopman/essays/abstract.html>

Lemire, D. (n.d.). Write good papers. Retrieved January 17, 2011, from <http://lemire.me/blog/rules-to-write-a-good-research-paper/>

Plonsky, M. (n.d.). Psychology with style: A hypertext writing guide. Retrieved January 17, 2011, from <http://www.uwsp.edu/psych/apa4b.htm>

Seals, D. R., & Tanaka, H. (2000). Manuscript peer review: A helpful checklist for students and novice referees. *Advances in Physiology Education*, 23(1), 52-58.

Jones, A., & Pham, H. (n.d.). Basic Referencing using the APA System, Teaching and learning unit, Faculty of Economics and Commerce, The University of Melbourne. Retrieved February 15, 2011, from <http://www.scribd.com/doc/57603066/A-Pa-Style>



APPENDIX C

RANGSIT JOURNAL OF SOCIAL SCIENCES AND HUMANITIES (RJSH)

Research Article Single-Column Template

Please note that the paper size is standard A4 size (approx 8.27 x 11.69 in)

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The length of the title of the article must not exceed 2 lines.**

Author Names (Use 10-point Times New Roman font on 11-point line spacing.

Begin with the first name of the author followed by the last name. For more than one author, type 'and' before the last author's name. For more than two authors, also separate each name by a comma (,).

Identify each author's affiliation by superscript numbers at the end of the author's last name.)

Author Affiliations (Use 9-point Times New Roman font on 10-point line spacing.

Include institutional and e-mail addresses for all authors. Place superscript number in front of author's affiliation corresponding to author's name.)

Received date month year / Revised date month year / Accepted date month year / Publish Online date month year

Abstract (10-point bold font on 11-point line spacing)

For abstract content, use 9-point Times New Roman font on 11-point line spacing. First line is indented 0.5 inch. An abstract of up to 250 words must be included. Include your major findings in a useful and concise manner. Include a problem statement, objectives, brief methods, results, and the significance of your findings.

Keywords: List up to 6 keywords and separate each keyword by a comma (,). The keywords should accurately reflect the content of the article. The keywords will be used for indexing purposes.

1. Introduction

The actual manuscript will be published in a single-column style in the RJSH journal. This single column template is adopted as a user friendly format. Thus, with this template, the main text is set in a single column. Type text with 10 point Times New Roman font on 12 point line spacing, with a 1.25 inch left margin, 1 inch bottom and right margin, 2 inch top margin, 1.2 inch header, and 0.6 inch footer. First lines of paragraphs are indented 0.5 inch. Please note that the paper size is standard A4 size (approx 8.27 x 11.69 in). In MS Word, select "Page Layout" from the menu bar, and under Paper Size select A4 Size.

The introduction should put the focus of the manuscript into a broader context. As you compose the introduction, think of readers who are not experts in this field. Include a brief review of the key literature. If there are relevant controversies or disagreements in the field, they should be mentioned so that a non-expert reader can find out about these issues further. The introduction should conclude with a brief statement of the overall aim of the experiments.

To insert a citation in the text use the author-year system, i.e., the author's last name and year of publication. Examples are as follows: "Since Johnson (2008) has shown that..." or "This is in agreement with results obtained later (Benjamin, 2010)". For 2-3 authors; all authors are to be listed, with "and" separating the last two authors, for more than three authors, list the first author followed by et al. The list of references should be arranged alphabetically by authors' names. All publications cited in the text should be presented in a list of references following the text of the manuscript. The manuscript should be carefully checked to ensure that the spelling of authors' names and dates are exactly the same in the text as in the reference list. Responsibility for the accuracy of bibliographic citations lies entirely with the author(s). Citation of a reference as "in press" implies that the item has been accepted for publication. Authors are responsible for the accuracy of the content of the references.

2. Objectives

The objectives of the study should be specified explicitly.

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This section should provide enough detail to allow full replication of the study by suitably skilled investigators. Protocols for new methods should be included, but well-established protocols may simply be referenced.

4. Results

The results section should provide details of all of the experiments that are required to support the conclusions of the paper. There is no specific word limit for this section. The section may be divided into subsections, each with a concise subheading. The results section should be written in past tense.

Tables must be cell-based without vertical lines. They should be produced in a spreadsheet program such as Microsoft Excel or in Microsoft Word. Type all text in tables using 9-point font on 10-points line spacing. Type the caption above the table to the same width as the table.

Tables should be numbered consecutively. Footnotes to tables should be typed below the table and should be referred to by superscript numbers. Submit separate files of tables in their original file format and not as graphic files in addition to incorporating in the main text. Tables should not duplicate results presented elsewhere in the manuscript (e.g., in graphs).

Table 1 Table caption

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R1			
R2			
R3			
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R5			
R6			

If figures are inserted into the main text, type figure captions below the figure. In addition, submit each figure individually as a separate file. Figures should be provided in a file format and resolution suitable for reproduction, e.g., EPS, JPEG or TIFF formats, without retouching. Photographs, charts and diagrams should be referred to as "Figure(s)" and should be numbered consecutively in the order to which they are referred

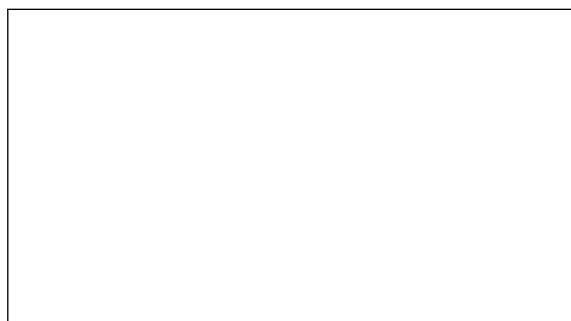
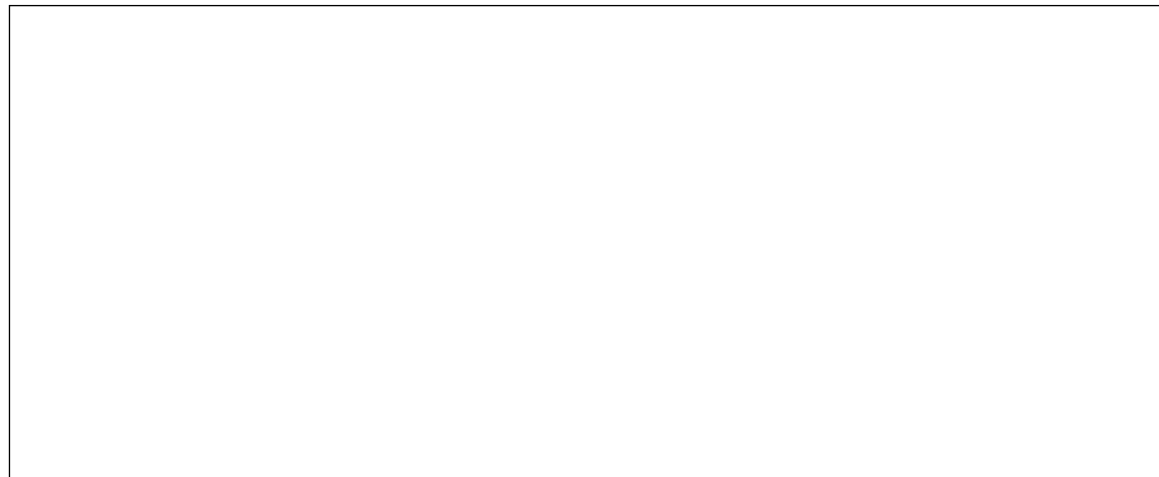


Figure 1 Figure caption

Table 2 Table caption

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**Figure 2** Figure caption

5. Discussion

The discussion should spell out the major conclusions of the work along with some explanation or speculation on the significance of these conclusions. How do the conclusions affect the existing assumptions and models in the field? How can future research build on these observations? What are the key experiments that must be done? The discussion should be concise and tightly argued. Conclusions firmly established by the presented data, hypotheses supported by the presented data, and speculations suggested by the presented data should be clearly identified as such. The results and discussion may be combined into one section, if desired.

6. Conclusion

The Conclusion section restates the major findings and suggests further research.

7. Acknowledgements

People who contributed to the work but do not fit criteria for authorship should be listed in the Acknowledgments, along with their contributions. It is the authors' responsibility to ensure that anyone named in the acknowledgments agrees to being so named. The funding sources that have supported the work should be included in the acknowledgments.

8. References

RJSH uses the American Psychological Association (APA) referencing style, details of which can be found at <http://www.apastyle.org/>. References are arranged alphabetically according to the last names of the authors and then chronologically. The first line of each reference is aligned left. Use hanging style of 0.5 inch after the first line of each reference. Example of APA references format exists at appendix B.



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APPENDIX D

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