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## Objective

As mentioned above the aim of this journal is to provide a platform and a means for disseminating and exchanging of knowledge and experience pertaining to academic advancement and research findings which may be beneficial for academy and society as a whole.

## Deadline - Period of Publication

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## Message from the President

### Season's Greetings!

#### Dear Our Valued Readers:

On behalf of the administrators, professors, support staffs, students and employees of UBRU, it is our pride and prestige to keep you informed that the year 2022 has been a golden year of our university as we have hosted the 20<sup>th</sup> ASEAN University Games, in the name of Thailand, which took place from 26 July until 6 August 2022 with about 2,000 athletes or sportspereloved sons from 11 ASEAN member countries participating. This sports event, supported by the Ministry of Higher Education, Science, Research and Innovation, Kingdom of Thailand, has been supported and certified and by ASEAN University Sports Council (AUSC). This has created a new page of history and era to our beloved university as well as our Ubon Ratchathani and Sisaket province where the sports event jointly took place. I, therefore, would like to use this journal as a platform to disseminate this special piece of information.

As the New Year 2023 is coming amidst a new kind of COVID-19 ram panting around, may I take this special occasion to wish all of you, our readers, all the journal staffs and the editorial board members A Very Happy New Year blessed with good health and safety from any kind of diseases, mental strength and physical security, great success in all missions, prosperity in your duties or businesses, and happiness in all situations concerned. I also would like to express our sincere thanks and appreciation to those who have contributed to our Journal by handing in academic articles and studies to the editorial board for publishing consideration and judgment. We highly appreciate your kind cooperation and distribution in this instance since it helps us fulfill our mission as a higher education institution. Therefore, we continue carrying our functions issuing this journal for distributing academic information, knowledge as well as advancement in various areas to our readers and interested persons. We would like to further stress, once again that this is a platform for our respected lecturers, professors, and researchers to exhibit their research papers, academic articles or academic accomplishment to other fellows.

Once again, have A Very Happy, Successful and Prosperous New Year 2023.



Assoc. Prof. Thamarak La-ongnual  
Acting President, UbonRatchathni Rajabhat University  
27 December 2022



## EDITORIAL

**Dear Valued Readers:**

As we are now approaching a New Year 2023, I would like to take this special occasion to wish all of you a blessed New Year filled with hope, safety, success, good health and strength, prosperity and power through out the year. As I have mentioned before “Times flies” as it is internationally stated and understood. Within a span of twelve months, it seems pretty long but it eventually passes quickly as usual without notice. During the passing year 2022 we have done our best to serve our valued readers and interested persons calling for papers and articles to be published in our online journals as to upgrade our academic platforms for your reading as well as searching. It is highly expected and hoped that our academic articles and studies have rung your bell clicking, adding up or building your perception, experience, attitude, interest, vision and world view.

Once again, we would like to invite our readers and interested persons to submit their academic articles or studies for publishing in our journal. Please contact us at ThaiJo system at <https://so04.tci-thaijo.org/index.php/ubruj> and website <http://www.bba.ubru.ac.th/ubruj/>.

We sincerely hope that you find this online journal meaningful, attractive and applicable in your situation. We also hope for your continued cooperation and contribution.



Asst. Prof. Dr. Pimook Somchob

Editor





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# Motivation in Duty Performing of the Employees at the Agricultural Cooperatives in Sisaket Province

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## Abstract

The purposes of this research was to investigate the motivation in duty performing of the employees of Agricultural Cooperatives in Sisaket province. The population for the study was a total of 344 employees working at the Agricultural Cooperatives in 21 districts, Sisaket province in the year 2020. The samples consisted of 200 employees calculated by Yamane's formula and selected by a systematic cluster sampling using the District Offices for Agricultural Cooperatives as the sampling units. The research instrument was a questionnaire and the statistics for data analysis was stepwise multiple regression.

The research findings were as follows: The variables that could predict the performance efficiency of the Agricultural Cooperatives' employees in Sisaket province consisted of four aspects, ranking from high significance to low, namely: progress opportunity, work success, responsibility, and nature of work. All of the four variables together could explain variance of work efficiency of the Agricultural Cooperatives' employees in Sisaket province with 81% accuracy.

**Keywords:** Motivation, Duty Performing, Employees, Agricultural Cooperatives Sisaket Province

## Introduction

Agricultural cooperatives conduct business in a multipurpose style in order to promote members to jointly do their business, help one another and the public by applying fine moral and ethical principles according to the human base for the benefits of the members and the public to have a better quality of life both economically and socially as stipulated in the cooperative rules and regulations to help agriculturalists facing problems, namely : (1) lack of capital, insufficient capital and have to loan money from local merchants or capitalists by paying high interest; (2) lack of arable land, some agriculturalists have only a small piece of land or have no land at all, thus having to rent it and pay high rental with being exploited; (3) production problem, agriculturalists lack knowledge on appropriate and modern production such as using fertilizer, pesticide, plant seeds, and animal species, thus having low production and not being worth the investment. Besides, the production output has low quality, not meeting

the requirement of the market, and lack of necessary basic factors such as an irrigation system; (4) marketing problems, agriculturalists are exploited in weighing the products and are to sell the product on the season since they have no storage. Thus, the price of the product is undersold by the merchant, causing their economic problem because they do not have enough income for the family expenses. This situation affects the society in the community, making their life quality and status lower than people in other occupations, such as lack of good education, hygiene, and property security.

For this reason, the Provincial Office of Agricultural Cooperatives of Sisaket province which has the duty responsible for monitoring the Agricultural Cooperatives in the Sisaket province has to search for a strategy in motivating to push the Agricultural Cooperatives' employees to have work satisfaction, happiness, motivation, and creativity which will result in achieving their organizations' objectives. If motivation building among employees is neglected, they would lack working motivation and may express their behaviors in various forms, such as often being absent from work, underwork, making less output or not meeting the set goal, cheating the organization, all of which cause damages to the organization. Therefore, creating working motivation is one of the methods the organization can respond to the employees' want and need. Appropriate motivation will help bind the employees with the organization and help them to have intention, and pay more attention to work. If the organization wishes the employees to have working motivation, the organization has to understand the employees' want and need and find working incentives in order to create their motivation. This is because if the organization lacks employees who have knowledge, skills, ability and appropriate attitude, it may affect the organization to be inefficient in working operation, lack of competitive potential and development, and may result in failure in organization operation in the long term (Manarutaya Prasopsin, 2014).

Based on the above mentioned, the researcher is interested to investigate motivation that affects working efficiency of the employees of the Agricultural Cooperatives in Sisaket province in order to know and learn the motivation that affects the working efficiency and help administrators to stipulate strategies and policies that are responsive to the employees' want and need in order to build working motivation so as to create efficient work output and be supplementary information and suggestions which will be useful for quality personnel development, enabling of doing efficient work, resulting in competitive potential, and keeping the quality human resources to stay with the organization forever.

## **Objective**

To investigate the motivation that affects duty performing of Agricultural Cooperatives' employees in Sisaket province.

## Literature Review

Suchada Sukbamsilp (2010: 25) states that motivation is something within a person being his or her driving force and power to do something until it is a success through a process by which every person expects and needs. The goal of life originates the drive in order to reach the goal, thus motivation will influence and motivate people to behave in one way or another and keep that behavior so that they can receive their expectation or need.

Orapin Chuchom (2012: 52) states that motivation is one of the factors that will help us understand people's behavior in working, why they are diligent, having perseverance and working well. Motivation has the following important roles.

1. Motivation can help explain the cause of behavior and can also predict people's behavior. Motivation is one of the factors which enables us to understand why people have a particular behavior, what is a motivation that determines people to commit that behavior. Besides, motivation also helps explain endurance enthusiastically, committing that behavior or activity to the fullest ability. Therefore, knowing the thing that motivates or drives people to express their behaviors will highly be beneficial for management of searching for the way people want to behave.

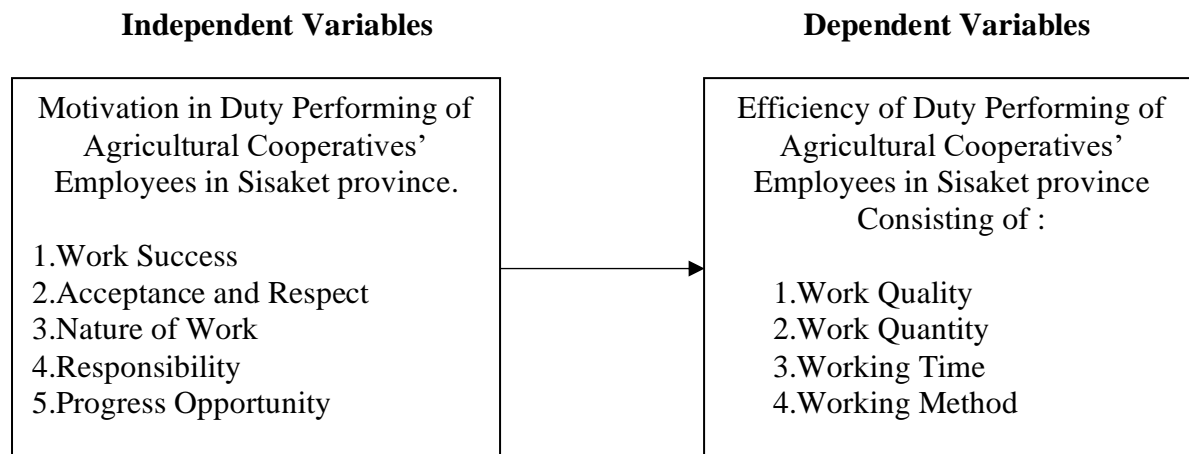
2. Motivation helps explain individual differences, for instance why some people have perseverance to behave or do activities to meet the goal while someone does not attempt to fight against an obstacle in order to meet the goal, as well as understand why we behave in such a way or do this activity, but sometime this behavior does not exist.

3. Motivation helps people, offices or organizations manage people or group of people to have motivation to have desired behaviors via ideas on many kinds of motivation which may be used and mixed together or to choose a way for motivating suitable for the people, group, situation and opportunity such as establishing motivation in working in response to people's want and need in an appropriate manner. Using both positive and negative motivation to motivate people, who participate in, and are responsible for doing activities by setting the goal and giving justice to them.

Onanong Songsuporn (2016: 25) has summarized that efficiency refers to working with ability, intention, having expertise, having checking systems and having success with maximum benefits for the organization. The efficiency of work that is successful comes from working with willingness, happiness, and cooperation between organizations by having returns that are commensurate to abilities worthily and with satisfaction originated.

### Conceptual Framework of the Research

The conceptual framework of the research is based on the two independent and dependent variables as shown in Figure 1 below.



**Figure 1:** Conceptual framework

### Research Methodology

#### Population and Samples

The population of the research was a total of 344 employees working at the Agricultural Cooperatives in 21 districts, Sisaket province in the year 2020 (Sisaket Provincial Cooperative Office, 2020, 3). The samples consisted of 185 employees calculated by Yamane's formula (Yamane, 1973 : 1089) with reliability level of 95% ( $\alpha = .05$ ) using the formula below.

$$n = \frac{N}{1 + Ne^2}$$

n        refers to size of the sample

N        refers to size of population

e        refers to level of statistical significance

$$\begin{aligned} \text{Represent} &= \frac{344}{1 + 344(0.05)^2} \\ &= 185 \end{aligned}$$

That is the sample size is 185, but for better reliability, the researcher added up extra 15 samples making a total of 200 samples for the study.

### Sampling Method

To achieve the set objective, the researcher employed multi-stage sampling by dividing the samples into proportional sizes according to the number of the personnel in the Offices for Agricultural Cooperatives in Sisaket province. Once the number of the samples in each district was derived, a systematic sampling was conducted and then the questionnaires were distributed to the total number of 200 samples altogether as shown in Table 1.

**Table 1** Number of the Samples Classified by District Offices of Agricultural Cooperatives as the Sampling Units

Group	District Office	Number of Employees
1	HuaiThap Than	28
	UthumphonPhisai	29
	Kantharalak	36
2	Benjalak	17
	PraiBueng	25
	Khukhan	21
3	RasiSalai	15
	Wang Hin	3
	Sri Rattana	6
	Phayu	5
	Nam Kliang	5
	Non Koon	10
<b>Total</b>		<b>200</b>

### Research Instrument

The research instrument for data collection was a questionnaire consisting of four parts:

Part 1 is a checklist about demographic data namely: gender, age, education level, monthly income, work experience, and position, all of which were measured using normal scale.

Part 2 is about motivation in duty performing of Agricultural Cooperatives' employees in Sisaket province on five aspects, namely: Work Success, Acceptance and Respect, Nature of Work, Responsibility and Opportunity for Progress.

Part 3 is about duty performing efficiency of Agricultural Cooperatives' employees in Sisaket province on four aspects, namely: Work Quality, Work Quantity, Working Time and Working Method .

Part 4 is an open – ended question asking for suggestions for the study on the aforementioned title above.

In Part 2 and Part 3 of the questionnaire, a five - level rating scale by Likert was applied using the criteria proposed by Bunchom Srisaard (2013: 121) as described below.

- 5 means the highest level
- 4 means high level
- 3 means moderate level
- 2 means low level
- 1 means lowest level

The criteria for interpretation of the average score of the motivation are:

- 1.00 – 1.50 means lowest motivation
- 1.51 – 2.50 means low motivation
- 2.51 – 3.50 means moderate motivation
- 3.51 – 4.50 means high motivation
- 4.51 – 5.00 means highest motivation

The questionnaire was examined by five experts to find the IOC--Index of item – objective congruence between the questions and the content (Bunchom Srisaard, 2013: 72) which specified that, to be accepted, the IOC had to be 0.60 or more. It was found that the IOC was 0.92.

To test the reliability of the questionnaire after improvement, it was tried out with 50 employees working at the Offices of Agricultural Cooperatives in Ubon Ratchathani province who had similar characteristics with the samples. After that the reliability was tested using Cronbach's alpha coefficient and it was found that it was .938 which was accepted, because according to Bunchom Srisaard (2013: 103), the accepted value was 0.80. Thus, it was used to collect the data for the study.

## Research Findings

1. The result of an analysis of the motivation and efficiency of duty performing of Agricultural Cooperatives' employees in Sisaket province.

Based on the analysis of the independent and dependent variables using mean and standard deviation of the research on the motivation and efficiency of duty performing of Agricultural Cooperatives' employees in Sisaket province, the results were found as presented in Table 2.



**Table 2** Summary of the mean and standard deviation of the motivation (independent variables) and the efficiency of duty performing of the employees of the Offices of Agricultural Cooperatives in Sisaket province (dependent variables).

Independent Variables	Level of Influence on Duty Performing		
	$\bar{X}$	S.D.	Interpretation
1. Work Success	4.09	.58	High
2. Acceptance and Respect	3.94	.65	High
3. Nature of Work	4.07	.56	High
4. Responsibility	4.08	.55	High
5. Progress Opportunity	3.86	.70	High
<b>Total</b>	<b>4.01</b>	<b>.55</b>	High
Dependent Variables	Level of Influence on Duty Performing		
	$\bar{x}$	S.D.	Interpretation
1. Work Quality	4.01	.59	High
2. Working Quality	4.03	.58	High
3. Working Time	3.98	.62	High
4. Working Method	3.97	.57	High
<b>Total</b>	<b>4.00</b>	<b>.54</b>	High

Based on Table 2 above, it was found that the level of working motivation was at a high level. Considering each aspect from high to low, it showed as follows: work success ( $\bar{X}=4.09$ ), responsibility ( $\bar{X}=4.08$ ), nature of work ( $\bar{X}=4.07$ ), acceptance and respect ( $\bar{X}=3.94$ ), and progress opportunity ( $\bar{X}=3.86$ ). Average of the influence upon the employees' duty performing was at a high level, ranging from high to low as follows: work quantity ( $\bar{X}=4.03$ ), work quality ( $\bar{X}=4.01$ ), working time ( $\bar{X}=3.98$ ), and working method ( $\bar{X}=3.97$ ).

2. The results of a Stepwise multiple regression analysis of the motivation that affected duty performing of Agricultural Cooperatives' employees in Sisaket province on the aspects of work success, acceptance and respect, progress opportunity as predictive variables, and working efficiency towards duty performing as dependent variables ( $n = 200$ ) were presented in Table 3 below.

**Table 3** The results of Stepwise multiple regression analysis of the data on motivation and working efficiency that affected duty performing of the Agricultural Cooperatives' employees in Sisaket province.

Predictor	VIF	B	Beta	t	p
Progress Opportunity	2.46	.12	.16	3.28**	.00
Work Success	3.24	.05	.48	8.64**	.00
Responsibility	3.69	.14	.14	2.44*	.05
Nature of Work	4.56	.20	.21	3.19**	.00
Constant = .31    R = .90    R <sup>2</sup> = .82 R <sup>2</sup> <sub>adj</sub> = .81    F = 215.65**    Sig F = .00					

\*\* Level of Statistic Significance at .01

From Table 3, the results of a Stepwise multiple regression analysis to predict the level of motivation towards duty performing of the employees at the Offices for Agricultural Cooperatives in Sisaket province on five independent variables, namely: work success, responsibility, nature of work, acceptance and respect, and progress opportunity, and the dependent variables were their working efficiency, revealed that the four aspects altogether were able to predict their motivation towards duty performing at 81% accuracy ( $R^2_{adj} = .81$ ) at the level of statistic significance .01, and with multiple correlation coefficient .90 ( $R = .90$ ). The four variables that were able to predict the motivation towards duty performing of the employees could be put into an equation as follows.

### Raw Scores of Regression Equation

$$\bar{Y} = .31 + .12 (\text{Progress Opportunity}) + .05 (\text{Work Success}) + .14 (\text{Responsibility}) + .20 (\text{Nature of Work})$$

From the equation, it could be explained that when the working motivation on work progress was promoted, progress opportunity would increase one unit and would result in an increase of the employees' working efficiency for .12 unit while other variables were static.

When motivation in duty performing on work success was promoted as one unit, it would result in the employees' working efficiency to increase for .05 unit while other variables were static.

When motivation in duty performing on responsibility was promoted as one unit, it would result in the employees' working efficiency to increase for .14 unit while other variables were static.

When motivation in duty performing on nature of work was promoted one unit, it would result in the employees' working efficiency to increase for .14 unit while other variables were static.

### Standard Scores of Prediction Equation

$Z = .16 \text{ (Progress Opportunity)} + .48 \text{ (Work Success)} + .14 \text{ (Responsibility)} + .21 \text{ (Nature of Work)}$

From the equation, it could be explained that when the working motivation on progress opportunity was promoted for one unit, it would result in an increase of the employees' working efficiency for .16 unit while other variables were static.

When motivation in duty performing on work success was promoted as one unit, it would result in an increase of the employees' working efficiency for .48 unit while other variables were static.

When motivation in duty performing on responsibility was promoted as one unit, it would result in an increase of the employees' working efficiency for .14 unit while other variables were static.

When motivation in duty performing on nature of work was promoted one unit, it would result in an increase of the employees' working efficiency for .21 unit while other variables were static.

### Hypothesis Testing

The hypothesis was that the working motivation in aspect of progress opportunity, work success, responsibility, and nature of work affected working efficiency on duty performing of the employees of the Offices for Agricultural Cooperatives in Sisaket province.

### Conclusion

The variables which could predict the working efficiency on duty performing of the employees of the Offices for Agricultural Cooperatives in Sisaket province consist of four aspects, ranging by significance, namely: progress opportunity, work success, responsibility, and nature of work, all of which could together explain the variance of working efficiency on duty performing of the employees of Offices for Agricultural Cooperatives in Sisaket province with 81% accuracy.

### Discussion

The motivation on duty performing consisted of progress opportunity, work success, responsibility, and nature of work together could predict the working efficiency on duty performing of the employees of the Offices for Agricultural Cooperatives in Sisaket province with 81%. The researcher saw that such motivation influenced on working efficiency on duty performing with statistical significance which was in line with Warunee Kaew-in (2017: 114-115) who studied motivation that affected working performance of the personnel of Pattara Hospital Company which found that, as a whole, the level of motivation affecting working performance of the personnel of the Pattara Hospital Company at a high level. Considering individual aspects, each of which was at a high level ranging from work success, responsibility, interesting nature of work, acceptance and respect, growth in an organization and progress opportunity respectively. This is also in line with Sathaporn Boriboonwat and others (2017: 33-35) who conducted a study on motivation affecting participation in education quality

assurance of the personnel of Loei Rajabhat University which found that the motivation that affected desire to participate in the education quality assurance most was that the regular work of the organization was successful meeting its set goal, followed by that the superordinate and colleagues accepted their knowledge, ability, as well as praised and respected them. Besides, it is congruence with Surapon Trichai (2018: 145-146) who studied motivation affecting work performance of the employees of the Pizza Company in Pathumthani province which found that success, acceptance responsibility, administration policies, governing, and human relationship with superordinates, working conditions, and relationship with colleagues had a level of motivation that affected work performance of the employees of the Pizza Company in Pathumthani province most. This is also in congruence of Makboonma Boonphatham (2020:104-106) who investigated motivation factors affecting work efficiency of the police officials of Mueang Amnat Charoen Police Station, Amnat Charoen province and found that there should have had working facilities, work outcome should have been praised by superordinates, and their colleagues should have been given opportunity to show their work outcome, and they should have a clean work place.

## **Suggestions**

### **Suggestion for Application**

1.The research found that working efficiency of the employees working at the Offices for Agricultural Cooperatives in Sisaket province was at a high level in all aspects, thus the findings of the study should be applied in order to elevate the efficiency of the organization, especially the personnel performing duties at the Offices for Agricultural Cooperatives in Sisaket province or other organizations which have similar working contexts as agricultural cooperatives, and other offices or organizations which want to improve their working efficiency.

2.The research findings showed that motivation in work performance was motivation on aspects of work success, acceptance and respect, work responsibility and progress, all of which are related to efficiency in working performance of the employees of Agricultural Cooperatives in Sisaket province. Therefore, those variables should be taken into consideration when planning and developing a form of creating motivation in duty performance for the employees at the Agricultural Cooperatives to have more working efficiency.

### **Suggestions for Future Study**

For future study, there should be a study on other factors applying the Total Quality Management (TQM) theory to analyze the research findings so as to look into the factors that increase the service quality or service efficiency of various organizations, from both government and private sectors. It is a continuation of an operational research in order to search for an innovation or a process to develop the organization to have concrete efficiency, and to evaluate innovation efficiency in the future.

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## Economic Factors and Saving Attitudes Affecting Personal Savings/Investment Planning for Gen x

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### Abstract

The purpose of this survey study was to investigate economic factors and saving attitudes that affected personal savings / investment plans for Generation X. The population for the study was the people residing in Ubon Ratchathani province in the following districts: Mueang Ubon Ratchathani, Warin Chamrap, Trakan Phuet Phon, Khueang Nai, Phibun Mangsahan, Muang Sam Sip, and Khong Chiam. The samples selected for the study were 385 people. The instrument for data collection was a five-scale rating questionnaire with reliability of .935. The statistics for data analysis were frequency, percentage, mean, and standard deviation. The multiple coefficient correlation and hypothesis testing were analyzed using the Structural Equation Modeling - SEM. It was found that the economic factors and saving attitudes affected the personal savings /investment plans for Generation X at the statistical significance level .01.

**Keywords:** Economic Factors, Saving Attitudes, Personal Savings, Investment Planning, Gen x

### Introduction

Thailand completely entered the aged society in the year 2021 with more than 20% of the whole country population were people aged 60 years and above. This is probably because a number of factors particularly advancement of science, technology and medicine that help the citizen to have longer life, and the rate of birth and death dropped continuously. This is why the number and the proportion of the aged population have increased rapidly. However, the savings to support the retirement are not sufficient and the elderly are not able to lean on the off spring as in the past, resulting in a shortage of incomes to nourish life and of monetary security (Thaipvd, 2022).

It was found that the population of 67 million people could be divided into groups. Group 1 is the pre-world war period called Greatest Gen born between 1901-1924 (aged 93-116 years) with a total number of 300,000 people. Group 2 is during the world war period called Silent Gen born between 1925-1945 (aged 72-92 years) with a total number of 5.4 million people. Group 3 is during end of the world war period called Baby Boomer born

between 1946-1964 (aged 53-71 years) with a total number of 15 million people. Group 4 is during a birth control period called Generation X born between 1965-1979 (aged 38-52 years) with a total number of 16.5 million people. Group 5 is a period of changes in technology called Generation Y born between 1980-1997 (aged 20-37 years) with a total number of 19 million people. And Group 6, called Gen Z, is a period when children growing up with technology and the parents working outside. They were born from 1998 and beyond (aged less than 20 years) with a total number of 10.6 million people, being the smallest group second to Gen Y but more than the Baby Boomer which ranks the third in number (Thansettakij, 2022).

Gen X is the group in between two age groups that is Baby Boomer which is the parents group and Gen Y which is a new generation at the beginning of working age. For this reason Gen X has a dominant characteristics mixed between the two generations. At the same time they also have dominant characteristics derived from the period of time and events that happen in their span of time. The dominant characteristics of Gen X which are better than other groups are that they are active in earning life, searching for new knowledge, mind opening and loving to develop themselves. This is online with their experience at the life span searching for life goal, progress, success including challenges, giving significance to what that can be done with creativity, creating different kinds of technology and innovation, having high selfness, being able to think and make decision on different matters resolutely while respecting other people's ideas different from theirs, and having self-confidence. They grow up in the age of competition in learning and working including earning life with determination to work for success and progress of the organization where they work. However, Gen X will work with their utmost ability for the organization's success, setting their life goal in advance and trying to eventually achieve the set goal. However Gen X will work with full effort and ability for the success of the organization, aiming to work in a secure environment with a good system, principles, goals, clear work guidelines, advanced financial plans, and a long term financial plan. Thus, Gen X people are active in working and competing in order to push themselves to have stable economy as fast as they can (Sara-dd, 2022).

Gen X is a group of people in their working period to build a family, growing in an era of fast-growing economy, thus daring to express themselves, having high selfness and creativity, but being the group being good at spending money. For this reason Gen X people should be particular in making financial plans not to incur much loan, and focus on more savings for the future. Though it is the time to make more money, it is also full of various burden following their ages. Savings for this generation should, therefore, be balanced with using life by dividing the savings of about 50-70% in a safe place as a pension money. The rest is for investment to get a growing return such as stock or stock mutual fund (National Savings Fund, 2022).

A study on savings and investment behaviors of Gen X in Bangkok area (Rungtawan Saephua, 2017) found that most Gen X had principal incomes from their salaries and wages from their permanent jobs the most with a monthly income more than 75,001 baht. Most of them had to patronize some people but they had a long term personal loan. The way to save up money most is to deposit money in the bank followed by long term fund (LTF) and they chose to invest at the top levels, namely mutual fund, common stock, real estate and land. The purpose of investment is for the expenses on retirement. On investment attitude. It was found that Gen X is the group that is resistant to losses in order to receive a higher return. On investment behavior, it was found that the majority of Gen X were able to insist their ideas reflecting that the majority still have aversion bias. This results in the minority to dare to cut loss.

In summary, Gen X in Bangkok area are groups of investors who dare to take risk, but are scared to make decision. Methavi Meekled (2019) conducted a study on the economic



factors affecting household savings of Thailand by testing the relationship of economic factors that affected household savings and testing the direction of movement of the relationship between economic factors that affected the savings. The findings showed that the factors in this model were able to explain the economic factors that affected the household savings of Thailand with 96.% accuracy.

However, the economic factors affecting the household savings of Thailand were inflation, long term stock mutual fund and national savings fund. As for the factors about the return rate or interest rate, the amount of money in economic systems, life insurance, provident fund, social security fund, government pension fund, and retirement mutual fund have no significance towards household saving of Thailand.

A study of Kamonwan Meethavorn (2019) found that the saving skills and forms of savings of Gen X who are official teachers under the jurisdiction of the Office of Secondary Education Area 9 choose to do savings with Krung Thai Bank the most. The saving skills consisted of knowledge on savings, savings behaviors and saving attitudes. The study revealed that the savings knowledge and saving behaviors of the samples were at a high level. The saving attitudes of the samples were at the highest level. Considering individual attitude aspects, the first three aspects with a high level were learning of the form of savings in details before making decision was necessary, knowledge on savings would help plan savings to more efficient and savings helped to have security on earning life both at present and in the future.

Therefore, the researcher is interested to do a study on economic factor and savings attitude that affect savings/investment planning of Gen X in order to know financial planning on retirement and take it to make financial plan on income, expenses, saving and investment. Besides, it is aimed at investigating the amount of saving, form of planning and various tools which are significant for savings, investment in order to increase sufficient returns on retirement and have financial reserve for future events.

## **Objective**

To investigate the economic factors and saving attitude that affect personal savings and investment planning for Gen X.

## **Literature Review**

Literature review is a survey analysis using Pearson's theory as a framework of the analysis and a study of related research documents as follows.

Savings means part of the income left from spending. Generally saving will happen when a person has more income than spending in an economic system. The more savings the more money can be used for investment and develop the country. The personal saving of each person can be deposited at a bank and financial institute and the return is an interest. The savings can be used to buy government bond and get the interest in return the savings used to buy various assets and receive the return as the profit. These savings are important for the family, making the family secured because they have the money to spend in case of expenses and have more income of deposit it in the bank of finance institute income to have interest or profit to left up the standard of life such as buy a car for convenience sake, hot howling to on foreign countries. Trying to prematurely savings of Thai people will also help decrease a problem of rallying on foreign capitals as well as help develop economy of the

country because the savings will be used in economic investment to build basic economic structure.

The goal of savings can be for short-term benefit such as for children's education and for long – term benefit such as for the expense at old age.

The problem of savings in Thailand comes from the fact that Thai people as a whole have low incomes, lack of knowledge in savings and investment and most financial institutes are usually located in towns of cities and the economy situation is dropped. The government implements a policy on low interest, these the people have no motivation in saving. (Aksorn Charoen Tat, 2022).

Investment refers to using the reserved money to make a higher return than savings. The investor believes that cash or the increased return would worthily compensate the period of time, the inflation rate and the risk which may take place. It could also be said that investment is a kind of savings invest to receive higher return and probable risk at or that investment is savings tant have more return but be accepted the increased risk must as well. Therefore, decision making to it must be carefully taken into consideration and the related information must be well studies so as to receive the expected return and decrease the risk from the investment.

Investment is important for the whole economic system of the country because investment will circulate their money to those who lack capitals include to develop as expand their business such as constructing factories, buying machinery, employing labor force.

In factors are actually the most important asset economic factors which will have impact on investment. Economic problems many affect other a great deal and may have most psychological effect towards the investors. The economic factors that the investors should take into account are monetary, interest rate and foreign exchange rates (Sriyapai, 2022).

Economic factors refer to dynamic factors when there is an action that creates activities, production diminution, consumption, exchanging, investment and soon, all of which resulting in the form of value of money.

In this study, it is aimed at investigation economic factors, namely: return or rate interest amount of money in the economic system, inflation, life insurance mutual reserve fund, social security fund, government retirement fund, short and long – term mutual fund, retirement mutual fund, national savings fund (Methavi Meekled, 2019).

Economic factors refers to inflation rate, economic variance, exchange rate and return factors are rate of return, savings such as tax reduction resulting in savings behaviors preparing for financial readiness for reinvestment (Waralak Limkanjana & Other, 2020). The economic factors that have quality relation that affects saving behaviors for retirement is an average monthly income, monthly expenses ad return of bonds (Pornpimol Charungwisankul and Poramin Kositkulporn, 2020).

Attitude means knowledge understanding being people's belief on general things. If the people understand that saving is a right thing and important, they will have good attitude toward that thing, but if their past knowledge is not good, they will have a negative attitude. The belief or feeling related to emotional feeling toward people, events or things in the sense that saving are necessary and important, they will have different personality and values. This may be resulted from their learning from their parents, teachers, friends and intimates. Besides, financial attitude is also said to be setting a long – term financial goal and attempting to reach the set goal for happiness in spending money rather than savings for the future and thinking of spending the money for today, but for tomorrow, it can be thought about later (Siwat Karunapen, 2017).

Previous studies support economic factors resulting in savings and investment planning such as a study by Waralak Limkanjana & Other (2020). It was found that the factors influencing saving behaviors for preparing financial readiness for retirement: a case study of SMEs of Thailand in the South, namely, gender, marital status, economic factors, financial easiness. Economic factors included inflation rate, economic variance, exchange rate, rate of return, period of time receiving the return, benefits of savings such as tax reduction, all of which affected saving in financial preparation for retirement, having household debts, being the owner of living residence, average monthly incomes per family, total monthly expenses per family, total debts or loans per family (Nittaya Paintara, 2019).

There was also a study that found that the family that divided the savings into parts before using the money would have more family savings than the family spent the money received. They had extra money left and they would have savings. There was significant difference between the two groups. Therefore, the government should promote the people to realize significance of financial planning by saving the money before spending, and making an account through out the life by using digital technology appropriate for different age groups (Sunaiya Daenghem and Narisara Charoenphan, 2021).

## Research Methodology

The population of the study was Generation X group aged 30-35 years old residing in Ubon Ratchathani province with a total of 363,301 people (Ubon Ratchathani Provincial Public Health, 2022). The samples of the study consisted of 385 people derived by Cochran's formula (Cochran, 1977) for proportion of the population which had the accepted level of discrepancy of 5%, the reliability of 95%, and the level of error not more than 5% for convenience of an evaluation and data analysis.

The samples of Gen X for the study were proportionally selected from the population residing in the first seven crowded districts in Ubon Ratchathani province, namely: Mueang 100 samples, Warin Chamrap 80 samples, Tra Kan Phuet Phon 80 samples, Khueang Nai 40 samples, Phi Bun Mangsa Han 30 samples, Muang Sam Sip 30 samples, and Khong Chiam 25 samples.

## Research Findings

Of all the 385 samples who answered the questionnaire, the majority of whom were 209 female or 54.30% and 176 male or 45.71%. Considering the age ranging from high to low percentage, the majority aged between 30-35 years old with a total of 116 respondents or 30.12% followed by aged 41-45 years old with the number 99 respondents or 25.71%, and aged 36-40 years old with the number of 97 people or 25.20%. Based on the occupation, from high to low, the majority of 109 people or 28.60% were in trade/personal business, followed by 106 people or 27.82% were government officials, and 102 people or 26.77% were employees/workers. Pertaining to their marital status, 201 people or 52.34% were married followed by 119 single people or 31% and 36 people or 9.40% were widowed. Considering the monthly income, from high to low, the majority of 131 people or 34.02% had an income of 16,000-20,000 baht per month, followed by 130 people or 33.80% had an income of 11,000-15,000 baht per month, and then 82 people or 21.30% had an income of more than 21,000 baht.

Considering the form of savings and investment from high to low percentage, it was found that the majority of 117 people or 46.33% bought life insurance, followed by 135 people or 35.52% invested in the fund, and then 40 people or 10.50% invested in real estate.

**Table 1** Mean and standard deviation of economic factors and savings attitude affecting personal savings/investment planning for Gen X

Economic factors and savings attitude affecting personal savings/investment planning for Gen X	$\bar{X}$	S.D	Level of Opinion
1. Interest/Return Rate (INT)	4.26	.51	Highest
2. Tax Deduction Plan (TAX)	4.25	.49	Highest
3. Loan Installment Payment (LOAN)	4.23	.47	Highest
4. Investment Risk (RIS)	4.33	.43	Highest
5. Motivation (MOV)	4.45	.43	Highest
6. Investment Knowledge and Understanding (LIT)	4.29	.39	Highest
7. Objective of Savings and Investment (OBJ)	4.30	.44	Highest
8. Preparation for Pre-Post Retirement (PRE)	4.30	.52	Highest
9. Proportion of Savings and Investment (SAV)	4.36	.45	Highest

From Table 1, the mean and standard deviation of the variables ranging from high to low, it was found that the factor with the highest level was innovation ( $\bar{X}=4.45$ ), proportion of savings and investment ( $\bar{X}=4.36$ ), investment risk ( $\bar{X}=4.33$ ), objective of savings and investment ( $\bar{X}=4.30$ ), preparation for pre-post retirement ( $\bar{X}=4.30$ ), knowledge and understanding in investment ( $\bar{X}=4.29$ ), rate of interest and return ( $\bar{X}=4.26$ ), tax deduction plan ( $\bar{X}=4.25$ ), loan installment payment ( $\bar{X}=4.23$ ) respectively.

**Table 2** Correlation for examining the discriminant validity

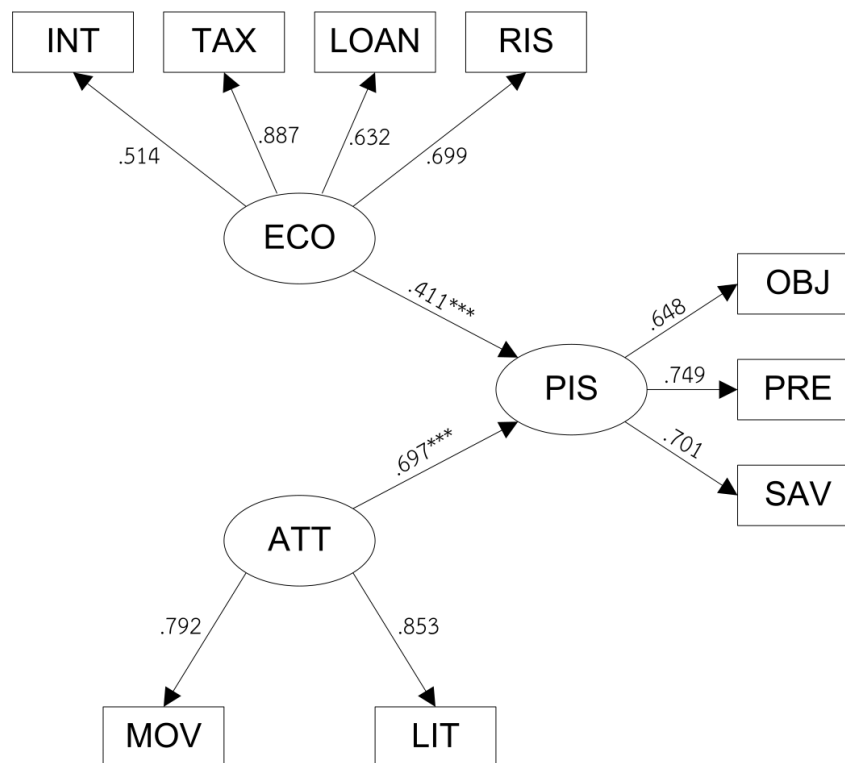
Variable	INT	TAX	LOAN	RIS	MOV	LIT	OBJ	PRE	SAV
INT	.701								
TAX	.489	.725							
LOAN	.423	.468	.810						
RIS	.360	.488	.603	.863					
MOV	.416	.367	.482	.403	.755				
LIT	.369	.406	.493	.301	.466	.742			
OBJ	.455	.398	.358	.466	.355	.462	.755		
PRE	.351	.291	.360	.362	.362	.431	.409	.734	
SAV	.419	.299	.441	.483	.391	.371	.366	.419	.724

\*  $\sqrt{AVE}$  are displayed on the diagonal

From Table 2, it was found that coefficient correlation of the variables had the value between .291-.603 which was less than .80. Thus, the measuring model had no problem of multicollinearity. The correlation value of each variable was not more than  $\sqrt{AVE}$  which indicated that each variable was different in measuring and had no Discriminant validity) (Hair et al., 2010)

### Result of Hypothesis Testing

The researcher examined the conformity and harmony based on the research framework made by the researcher and the meprical data, it was found that the economic factors and saving attitude affected personal savings/investment planning for Gen X. This is in line with the empirical data with  $\chi^2/df = 2.011$  which is close to 2,  $p=.092$ , more than .050, GFI = .943, more than .900, AGFI=.921, more than .900, CFI = .974 , more than .900, NFI = .956, more than .900, RMSEA = .022, less than .050, RMR = .037 , less than .050 (Schumacker and Lomax, 2010, Wanichbancha, 2019, Phorncharoen, 2020)



$$\chi^2/df = 2.011, p\_value = .092, GFI = .943, AGFI = .921, CFI = .974, NFI = .956, RMSEA = .022$$

**Figure 1** Conformity and harmony of the model and the empirical data of economic factors and saving attitude affecting personal saving and investment planning for Gen X

**Table 3** An analysis of economic factors and saving attitude affecting personal saving and investment planning for Gen X and examination of conforminty of the model and the empirical data

Antecedents	Consequence	STDYX (β)	EST	SE	z	p	R <sup>2</sup>
ECO	PSI	.411	.467	.119	3.453***	.000	.783
ATT		.697	.660	.142	4.908***	.000	
χ <sup>2</sup> /df = 2.011, p = .092, GFI = .943, AGFI = .921, CFI = .974, NFI= .956, RMSEA = .022							

From Table 3, the result of testing of path coefficient of the variables affecting personal savings/investment planning for Gen X (PIS), it was found that the path coefficient was between .411-.697 and it could order the variables affecting personal savings/investment planning for Gen X, namely: saving attitude (ATT) affected the personal savings/investment planning for Gen X with the statistical significance at the level .01 and marketing emphasis (ECO) affected with statistical significance at level .01.

## Conclusion

The fundamental information of the more than 385 Gne X respondents, the samples of the study residing in Ubon Raththani province revealed that they were female 54.30% or 30.12% aged bewtween 30-35 years old whose occupations were trade/personal business 28.60%, having married status 52.34%, having monthly income of 16,000-20,000 baht or 34.02%, having life insurance 46.33%.

From the study objective aimed at investigating the economic factors and saviing attitude affecting savings/investment planningfor Gen X people, it was found that the economic factors included interest rate/ return rate, tax deduction planning, loan installment payment, investment risk, and savings attitude which included motivation, investment knowledge and understanding affected personal savings/investment planning for Gen X.

## Discussion

The results of the study on economic factors affecting personal savings/investment planning for Gen X could be discussed as follows:

Based on the study, the economic factors affecting personal savings/ investment planning for Gen X were found that the economic factors included interest rate, rate of return, tax deduction planning, loan installment payment, and investment risk. It is incongruence with a study of Khanitta Naiyanamat (2019) who studied personal financial management behaviors of the officials of local administration organization in Khemmarat district, Ubon Ratchathani province. It was found that life insurances were most done in order to help deduct the tax if the incomes increased to the criterion to pay tax. However, most of their incomes do not meet the criterion of paying tax. That is they plan to pay tax using life insurance to deduct the tax. This is in line with this study which showed that tax deduction planning is important and effect personal saving /investment planning for Gen X that is in the same way as a study of Sathat Lekavanich (2019) which found that the economic factors affect decision to save money to use on retirement of government officials in the Revenue Depart (Main Office). It was found that

the factors on incomes, expenses and debts of the savings makers affected decision in savings at a high level. Furthermore, he factors on the return from savings, that is the period of time to pay return by month and paying by year also affected the decision to save money at a high level. Besides, the rate of return to receive and the form of the return also affected the decision to save money.

A study by Phawanankamon Yoamthaisongthanon (2020) on financial planning for retirement of villagers, Klang Mueang On-Nuch- Lad Krabang, Bangkok being a form of buying Super Savings Funds (SSF). That is a legal entity issued a mutual fund or Stock Exchange of Thailand should provide information to the people about the good points and bad points of savings and investment in the form of buying Super Savings Funds (SSF) which can be used to deduct tax on a yearly basis and that it gives a higher return than depositing the money in the bank and bond but it comes with a high risk since it takes 10 years and above.

If the people have knowledge and understanding and accept the risk, they will make decision to invest properly and this will be connected and in line with the finding of this study. This shows that loan installment payment is important and it affects personal savings and investment planning for Gen X.

The attitudinal factors on savings affected personal savings/investment planning for Gen X included motivation, knowledge and understanding of investment. This is in line with a study of Chonticha Wiriyaongjaroen (2020) which investigated the behavior of doing accounts for personal financial planning of the people in Thoburi bank area whereof the government support had important part in motivating the people to know and understand the way of savings planning, use the advantage of controlling the expenses on financial payment. Besides, it is in congruence with a study of Sanit Meearthon (2017) which found that attitude on savings and investment was at a high level, namely: risk taking, expected return, knowledge and understanding, belief, experience on savings and investment, and a study of Kamonwan Meethavorn (2019) which found that attitude on knowledge of savings, a study of the form of savings elaborately before making decision to save money is necessary because knowledge of savings will help to have a more efficient savings plan and that savings help us to have security in our life earning at present as well as in the future respectively which will connect and be in line with the result of this study. It can be seen that knowledge and understanding of savings are important and also affect personal savings/investment planning for Gen X.

## **Suggestions**

### **Suggestions for application**

The study revealed that the economic factors affecting personal savings/investment planning for Gen X were ranked by order of influence were: attitudinal factor on savings and economic factor which could be suggested for future application as follows.

1. The attitudinal factors on savings consisted of motivation, knowledge and understanding on investment which affected personal savings/investment planning for Gen X. The offices concerned should communicate to the people to motivate and arouse Gen X, to realize that knowledge and understanding of savings and investment are necessary, on the basis of their characteristics. If they have good knowledge and understanding, they would be able to have efficient savings and investment.

2. Economic factors consisted of investment risk, rate of interest and return, and tax deduction plan. The offices concerned should promote Gen X people to have knowledge and ability to manage investment risk, knowledge on rate of interest/return from various investment

including assisting in tax deduction planning so as to have savings and investment with maximum advantages.

### **Suggestions for future study**

1. Since there is some limitation in this study, particularly on research variables, scope of the content should be expanded together with reasoning relation of the surrounding factors at a macro-level, financial skills and personal financial management that are the factors for success in savings for retirement.

2. This study chose to investigate the economic factors and attitude that affected personal savings and investment planning for Gen X. For future study, the focus should be on investigating the factors affecting personal financial planning and investment planning for other Generations in order to find information for savings/ investment planning for each generation.

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# The Development of Supporting Services Teams of the Independent Direct Sellers and Members of the Direct Selling Association of Dietary Supplement Business of Thai Direct Selling Development Association

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## Abstract

Objectives to study 1. To study and analyze the direct sales business management of dietary supplements of the Thai Direct Selling Development Association in Bangkok compared with the direct sales business market in Thailand. 2. To study and analyze the quality of direct sales business management of dietary supplements by the Direct Selling Development Association 3. To determine an effective service quality management approach to formulate strategies for the direct sales business of dietary supplements of the Thai Direct Selling Development Association in Bangkok in the future. Population and sample Direct sales business members are divided into 3 groups, namely 11 large, medium and small direct sales companies. Calculate the sample size of Taro Yamane (Taro Yamane.1973:125) with a confidence level of 95%. 400 people interpreted data using percentage (%), mean ( $\bar{X}$ ), and standard deviation (SD).

The results showed that

1. It was found that the direct sales business has played an important role in generating the country's income to the economy of Thailand for many decades. especially over the past decade. The direct sales business has come up with a variety. Both large, medium and small business units are trying to overcome the domestic consumption market by using the direct sales system model to distribute products and increase sales volume. Dietary supplements, especially through the lens of independent direct sellers. The results of the study will be used to improve the service quality of direct selling companies for efficiency.

2. Found that direct sales service quality management is an important factor that affects business success. When considering in detail, it was found that the relationship between service providers (direct sales company) with service recipients (Independent Direct Sellers, Agents, Customers) are the most important among the other service dimensions. looking through the size of the company large company Pay attention to every detail, service quality

3. Found that the overview of direct sales companies in Thailand will provide sales promotion services to independent direct sellers in order to meet the standards of the Thai Direct Sales Development Association. In addition, the objective of the association is to raise

the standard of direct selling business at the same time, building confidence among new direct sellers and customers in the direct selling business network. Therefore, promoting business development plans requires specialized professionals. This aspect comes to take care of business outlines under the framework of the Thai Direct Selling Development Association.

**Keywords:** Direct Sales Business, Service Development, Through Support

## Introduction

Development services to individual clients, as well as improving the environment to support the provision of efficient services to improve the management of the trading business are able to manage the services in line with the standards and customer satisfaction by focusing on the quality of service which is operating according to its' requirements by creating customer satisfaction and operating costs that are competitive (Phoosuwan, T., & Muangsan, U., 2022). In order to create the differences, able to meet the needs of customers, and reduce the cost of doing business (Kewsuwun, N., 2020) therefore, to promote the marketing to develop the direct selling business of the dietary supplement of Thailand, it is necessary to do the research about the marketing to support the direct sales to use the results of the study to manage the organization to be effective and can be implemented in developing and defining strategies to achieve a competitive advantage under the expansion of the direct sales group of dietary supplement. Anyway, the competition is likely more intense on the environment that is constantly changing all the Supakorn Limkunthammo, Kobchai Mekdee, Booncherd Siriyot, Wanwimol Boonyaphong, Sutapat Chanprasert, Pornthepkaewchuea & Chalermchai Kittisaknawin (2016). The expansion of direct selling of skin care products and the competition is likely to be more intense affect the result of the direct sellers try to develop and define the strategies to achieve a competitive advantage under the circumstances and environments change over time. This can lead to business results in the management of the organization to be effective and can be implemented practically.

## Objectives

1. To study and analyze the management of direct selling business of dietary supplement of Thai Direct Selling Development Association in Bangkok area when compare to the market of direct selling business in Thailand.
2. To study and analyze the quality of service management of direct selling business of dietary supplement of Thai Direct Selling Development Association in Bangkok area in the point of view of the clients.
3. To establish an effective quality management service guideline to define the strategy of direct selling business of dietary supplement of Thai Direct Selling Development Association in Bangkok area in the future.

## Literature Review

The result of this research found that the opinions on the characteristics of the work performed by the whole group had a high level of feedback. The opinions on the factors of work experience were at a high level. The opinions on the relationship between the management of the company and the mother team were at a moderate level and the opinions on organizational loyalty were at a high level. The hypothesis testing found the difference of the individual characteristics were age, education level, the difference in per capita monthly income affects the organizational loyalty of the Thai Direct Selling Association's members not different. The role of the work in the participation in the administration of the agency, The nature of the work. Payroll, compensation and welfare and work independence affect corporate loyalty of members in direct sales business. For the factors in work experience, The success of the work. Progress in work and the security of work affect the loyalty to the organization of members in the direct sales business. The Relationships between the management of the company and the mother, relationships with the company executives, and relationships with colleagues have contributed to the loyalty of the direct sales members (Niwat Chandra Chor, 2019).

## Research Methodology

### Population and sample

1. The population is divided into two categories which are 12 direct selling companies of Thai Direct Selling Development Association.

2. The sample consisted of voluntary participants divided into three groups which are 3 large size direct selling companies that run the business for at least 10 years and has more than 100 million Baht turnovers per month, 4 medium direct selling companies that run the business for at least 5 years and has more than 50 million Baht turnovers per month, and 5 small size direct selling companies that run the business for at least 1 year and has more than 10 million Baht turnovers per month. Calculate the sample size of Taro Yamane with a confidence level of 95%, obtaining a sample size of 400 people.

3. Multistage Sampling as follows: Divide the samples into 3 large direct sales companies that have been in business for at least 10 years and have a turnover of more than 100 million baht per month. 4 medium-sized direct selling companies that operate in price They are at least 5 years old and have a turnover of more than 50 million baht per month, and 5 small direct sales companies that have been in business for at least 1 year and have a turnover of more than 10 million baht per month. Simple random sampling, only for the population who used to buy dietary supplements through digital media only, considering their willingness to answer the questionnaire and wait for the questionnaire to be collected immediately.

The tool used in this research was a questionnaire. (Questionnaires) to collect information The study was drawn from concepts, theories, documents, and relevant research as guidelines for constructing the questionnaire,

Part 1: personal data, comprising 5 items, namely age, marital status, education level, occupation and monthly income In which the question is a type of choice to answer only one answer. which is a type of closed-ended question (Closed-ended Question)

Part 2 The direct sales business management of dietary supplements of the Thai Direct Selling Development Association in Bangkok compared to the direct sales business market in

Thailand, 7 items, which the question is a single-answer type. which is a type of closed-ended question

Part 3 The quality of direct sales business management of dietary supplements of the Thai Direct Selling Development Association in Bangkok in the perspective of service recipients, amounting to 17 items.

The researcher tested the validity by asking 3 experts to check the validity of the content with the index of consistency (IOC) 0.50. The questionnaire was revised or omitted for the item with the IOC value less than 0.50 for consideration. The questionnaire had a consistency index ranging from 0.66-1.00 (Rovinelli and Hambleton, 1977). The modified questionnaire was used to try out with 30 non-sample groups. to find confidence (Reliability) and consistency in the questionnaire Sum of the confidence value Alpha = .837

### **The scope of content**

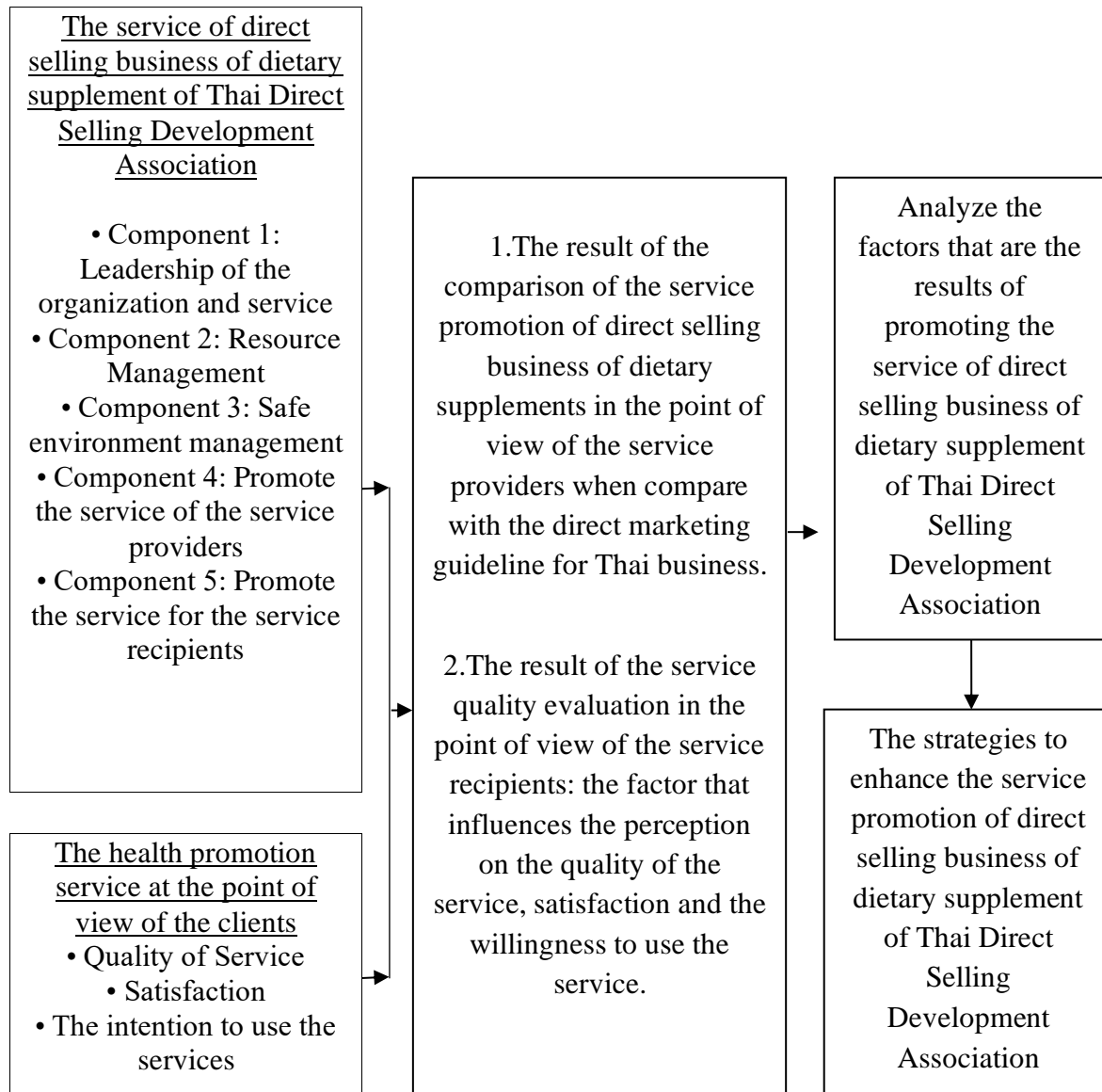
This research on the strategies to enhance the service of direct selling businesses of the dietary supplement of Thai Direct Selling Development Association is a mixed method research. It aims to investigate the selling strategies by collecting data from the relevant parties which involve marketing managers and direct sellers of the direct selling business to conduct the research process under the framework, concept, theory and related research. The researchers also included observation and in-depth interview with the key informants to get the factors associated with the strategies that enhance the effectiveness of the service of direct selling business of the dietary supplement products of Thai Direct Selling Development Association.

### **Variables**

1. Independent Variable: general characteristic of Thai Direct Selling Development Association, the management of services of the direct selling business of dietary supplement products.

2. Dependent Variable: the result of services of the Thai Direct Selling Development Association in the point of view of the clients.

## Conceptual Framework



**Figure 1:** Conceptual framework

### **Research Process**

1. Study about the concept, theories, and research related to the manual of direct marketing for Thai business. As well as the improvement of the service quality of Thai Direct Selling Development Association in order to define the framework of the research.
2. Analyze about the internal factors of direct selling business of Thai Direct Selling Development Association.
3. Improve the quality of service of direct selling business of Thai Direct Selling Development Association.
4. Evaluate the result of the improvement on the quality of services of the direct selling business of Thai Direct Selling Development Association in the point of view of the clients and the achievement of the services of Thai Direct Selling Development Association.
5. Evaluate the model of the improvement of the services of direct selling business of Thai Direct Selling Development Association in the point of view of the service providers.
6. Summarize and present the strategies to enhance the quality of the effective services of the direct selling business of the Thai Direct Selling Development Association.

### **Research Tools**

The questionnaire is divided into 4 parts which are:

- Part 1: 10 check list about the general information of the respondents.
- Part 2: 24 check list about the opinion towards the service of direct selling business.
- Part 3: 72 questions to rate the levels of the opinion towards the service of direct selling business by using 5 level rating scale.
- Part 4: 25 questions to rate the levels of satisfaction on the potential of recent direct selling business by using 5 level rating scale.

### **Collection of Data**

The data were collected by both the questionnaire and interview the designated sample by the procedure as follows:

1. Collecting data from the questionnaire which the researchers collect the data themselves by sending the request for cooperating in completing the questionnaire from the respondents which are the designated sample from Thonburi University.
2. Data were collected from the interview, which the interviewees were informed about the purpose of the interview and the information about the interviewing will kept confidential so the interviewees will get no effect. During the interview, the interviewing will be note taking, tape recording, and some important information will be emphasized by the interviewer to make sure that the interviewees understand about the interview.

### **Data analysis and statistics used.**

1. Analyze the operation in terms of service by using the descriptive statistics, percentage and mode.
2. General information and the condition of the organization of direct selling business received the questionnaire that used to study about the factor of the structure direct selling business.
3. Comparison with the T-Test by applying the rating criteria in order to continue the development for the excellence.



4. The information on the quality of service based on the evaluation of direct sales clients, the collection of the quantitative data, analyzed with the descriptive statistics, percentage and standard deviation.

## Research Finding

### **1. Research result and analyze the service of the direct selling business.**

General characteristic of the respondents in the overall, the majority of them is female 78.5%, age between 20-29 years old 47.6%, bachelor degree graduated 59.7%, work for the direct selling company for more than 5 years 33.5%, work as employee 62.3%, work full-time 93.7%, work in supporting position 36.7%.

The service provider of the direct selling business A is mostly female 90%, age between 20-29 years old 76.7%, the high vocational school graduated 66.6%, work for this direct selling company less than 1 year 46.7%, work as employee 76.7%, work full-time 96.7%, and work as general staff, customer service and recruitment team 66.6%.

In summary, the overview of the direct selling company A, B and D is that they provide the promotion for the independent direct sellers if comparing to the standard of the direct marketing. In terms of the promotion of the direct selling business, they are in the middle group which can be mentioned that they start the operation by following the guideline that set up together, has the communication in order to create the understanding to the relevant parties. However, the results were not at the satisfactory level due to the lack of systematic data collection.

### **2. The results of the study and analysis of the perception of quality of service to promote the direct selling business of the companies of Thai Direct Selling Development Association in the point of view of the service clients.**

The result of the data analysis showed that in overall, the quality of the promotion service for the direct selling of the direct selling companies are in relatively good level for all aspects. The highest mean is on the aspect of the quality of the relationship between service providers and service clients ( $\bar{X} = 4.2$ , S.D. = 0.48). The second rank of the highest mean is on the aspect of the intention to use the service ( $\bar{X} = 4.19$ , S.D. = 0.69). When comparing between each direct selling company, in overall, the direct selling company A has the highest average of all dimensions of the quality ( $\bar{X} = 4.37$ , S.D. = 0.26) while the second rank is the direct selling company B which the average of all dimensions of quality has the mean equal 4.27 and the standard deviation equal 0.38.

### **3. The guidelines of the quality improvement of the promotional services of effective direct selling business to set the strategy to promote the service of direct selling business in the future.**

The analysis result showed that the standard and knowledge about direct selling promotion can be applied using as the guideline to improve and develop the quality of direct selling promotional service.

The result about the factors and used in terms of confirmatory factor analysis that influence the perception of quality of promotion service of independent direct sellers of the direct selling company in the view of the service clients pointing out that the perception on the quality of the service of the service clients can be measured by the 4 aspects which are technical aspect, environmental aspect, management aspect, and the relationship between service

providers and service clients. Technical aspect has the expertise as the most important variable, management aspect has the waiting time period as the most important variable, environmental aspect has the management of environment to support the direct selling business as the most important variable, and the relationship between service providers and service clients is the most important aspect. Therefore, the direct selling company should focus on these issues to improve the service in order to promote the perception of the service clients on the quality of the service at a good level. For the expertise aspect, the direct selling business should be able to show to service clients that the product narrator and the marketing plan narrator have sufficient expertise. The service system should be able to control the waiting period of each process to be as what the system set. The environmental management of the direct selling company should be contributing to health and safety. The good reaction of the service providers towards service clients should be done by showing friendliness which will help to create the better perception of the service clients on the quality of the service. (Mukda Phuekham et al., 2021)

Moreover, the result of the research showed that in the satisfaction aspect of the customers, there is some association with the element of the intention to use the service. Therefore, if the direct selling company can convince the service clients to see the value of continuous services at the direct selling company, it will be the factor that affects the level of satisfaction of their clients.

The perception on the quality of service of the client is related to the quality in terms of technique and influence directly. The quality of management also has a direct influence on the quality perception of the client as well. Then, the direct selling company should be able to present to the clients that the product narrators and marketing plan narrators are the experts. The direct selling company should operate via the well-managed system which has the preparation of the program/ project/ activity which are realistic. The budget should be supported in order to operate the service to have the good monitoring to get the improving of the service quality in the future.

## Conclusion

The service promotion for independent direct sellers of the direct selling company when compare with the promotional standard for independent direct sellers.

The result of the finding pointed out that the direct selling company who offer the promotional service to their independent direct sellers that relevant to the standard of the direct selling company will help supporting the independent direct seller in process level will have the achievement at medium level. Three direct selling companies are able to improve the quality of the services in many aspects which including the leadership of the organization, resources management, provide the environment that support the independent direct sellers, promote independent direct sellers and the staff of the direct selling companies, support the independent direct sellers, service clients, family and relative, and also promote the independent direct sellers in the member group to be more effective. To gather the results of the operation in continuously systematic will help the direct selling companies to have more information in order to improve more efficiency. (Mukda Phuekham et al., 2021) on consumer behavior marketing strategy Integrated Marketing Communications and the management that affects the management of the direct selling business in Thailand and (Jintana Pornjadet: 2015) on the leadership development guidelines of the Direct Selling Business Organization. found the feature Required Skills For the development of leaders in order of importance according to the equation from highest to lowest: 1) communication skills 2) vision 3) acceptance of trust

and 4) transformational leadership. The results of this study were statistically significant at 0.01 and 0.05 levels. Leadership development methods were 1) coaching, 2) learning organization, 3) teamwork, and 4) career progression and training plans.

For the medium-sized direct selling companies which are the companies that focus on excellence in business operation could still insert the promotional activities for the independent direct selling into the routine as there are many activities that the direct selling companies still operate and has the channel for further development. For example, to evaluate the members who are service clients, the direct selling companies already have narrators or speakers who can give the service to the clients properly. To create the idea or concept and make all members understand the philosophy of promoting independent direct seller to have adequate skills to provide the service of the independent direct seller into their full-time job which include both the service staff and supporting team. As the medium size of direct selling companies have experience in improving the service quality in the aspect of direct selling business and they are standard certified in many cases, then they can easily operate their businesses according to the standard in the operating level. Anyway, the board of management of the direct selling businesses should start reviewing the direction and policy guideline to consistent and represent the commitment to develop the direct selling businesses that support the independent direct sellers, and then staff will be able to operate the issues that related to the policy which corresponds to Krittaya Uttho, Weerawet Uttho, Saifon Innam, Hathaiphonkampawong & Suthita Phasan (2022). On the model of counseling in Buddhist psychology for development management competence of direct sales businessmen, Buddhist principles and counseling psychology to develop the management competencies of direct sales businessmen derived from synthesis, consisting of: (1) how to deal with problems and obstacles in working which are consistent with the 4 Noble Truths, (2) methods of working successfully that is consistent with the principles of Power 4, (3) how to build the morale of the team that is consistent with counseling to motivate them to succeed at work, and (4) how to give advice. To the team members when facing working problems that are consistent with the Buddhist psychology counseling. The knowledge competency management of direct sales businessmen consists of: (1) the concept of center management, (2) knowledge necessary for center for successful management, (3) specific qualifications of the company's products, and (4) customer segments that use the company's products for skills, including: (1) techniques or methods to motivate customers, (2) approaches to approach customer groups to open and close sales, and (3) how to motivate team members to be more active and increase sales and features, including: (1) strengths in convincing customers to be interested in the product, (2) dealing with customers who do not show good attitude for the product, and (3) the personality of the management center.

The small-sized direct selling company is the direct selling company that has the chance to develop into the standard direct selling company that can promote the independent direct sellers, even if the overall mean is so little when compared to the other direct selling companies. Public relation to let the employees know about the activities provided by the direct selling company, especially, to work with various networks of the member to help all levels of staff understand the developing system on service quality of the direct selling companies. In addition, the direct selling company that has the policy to get the accreditation from direct selling companies and the service quality is certified by the direct selling companies. The content of the promotional aspect for independent direct sellers that already available will be the opportunities to improve the service of the independent direct seller to keep their businesses continue which corresponds to Laddawan Chukerd et al. (2564). Regarding the application of the principle of ditthummikatha benefits for direct selling business in the digital society, it was

found that It is the principle of benefit in the present, which consists of (1) Utthana Sampada (perseverance), (2) Protection of wealth acquired, (3) Kalpayanamittata. (having good friendliness) (4) Socivit (being appropriate) 3) Applying the principle of Dhitthumikat benefits for direct selling business In the digital age society, it was found that when direct sales business operators applied the principle of utilitarianism make various management of the business to develop and build confidence for customers The business has received good feedback from customers. until successful

Guidelines to improve the quality of the service to promote the independent direct sellers which are effective to set the strategy of service promotion for the independent direct sellers in the future.

From the result of the research, it can be seen that the direct selling companies of Thai Direct Selling Development Association operate their organization relevant to the standard of the independent direct selling companies of the business promotion department, ministry of commerce. They are able to do the self-assessment to describes the service management of the direct selling companies under the standard, then send the request to survey in order to gather the information and report to the committees to certify the standard of direct selling companies in the future.

## Discussion

The service promotion for independent direct sellers of the direct selling company when compare with the promotional standard for independent direct sellers.

The result of the finding pointed out that the direct selling company who offer the promotional service to their independent direct sellers that relevant to the standard of the direct selling company will help supporting the independent direct seller in process level will have the achievement at medium level. Three direct selling companies are able to improve the quality of the services in many aspects which including the leadership of the organization, resources management, provide the environment that support the independent direct sellers, promote independent direct sellers and the staff of the direct selling companies, support the independent direct sellers, service clients, family and relative, and also promote the independent direct sellers in the member group to be more effective. To gather the results of the operation in continuously systematic will help the direct selling companies to have more information in order to improve more efficiency. (Mukda Phuekham et al., 2021) on consumer behavior marketing strategy Integrated Marketing Communications and the management that affects the management of the direct selling business in Thailand and (Jintana Pornjadet: 2015) on the leadership development guidelines of the Direct Selling Business Organization. found the feature Required Skills For the development of leaders in order of importance according to the equation from highest to lowest: 1) communication skills 2) vision 3) acceptance of trust and 4) transformational leadership. The results of this study were statistically significant at 0.01 and 0.05 levels. Leadership development methods were 1) coaching, 2) learning organization, 3) teamwork, and 4) career progression and training plans (Niwat Chandra Chor, 2019).

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## **Suggestion**

### **Policy Recommendations**

The finding showed that direct selling companies have promotional service for independent direct sellers which inconsistent with the standard of direct marketing which the business promotion department, ministry of commerce is the responsible agency. Therefore, the businesses should expand their services as Thai Direct Selling Development Association is one organization that provide the standardize service. It is important to focus on the new target group and contribute to the development activities to promote independent direct sellers of Thailand as well as develop the health and environment which are related to the direct selling companies and the responsible person in the future.

### **Practical Proposals**

As the direct selling companies must have the role in promoting independent direct sellers, therefore:

1. The executive of the direct selling companies should pay attention to the promotional activities for independent direct sellers to be more effective, along with providing the service of direct selling operation in order to set the policy and guidelines to promote the independent direct sellers, staff and clients in both the part of direct selling companies and members.
2. The direct selling companies should pay attention to retain the experienced staff that has the ability to provide the service. The companies should also provide the activities for the promotion of independent direct sellers such as provide the exercise area and equipment, provide the exchange platform to share the management knowledge among the organization because the result of the research found out that the service provider is the factors that affect the perception on the quality of the promotional service for independent direct sellers.
3. The business promotion department, ministry of commerce should not only provide the policy to the direct selling companies, they should also give the direct selling company some chance to develop the same as provided by Thai Direct Selling Development Association. The direct selling company is part of the service unit for independent sellers to ensure that members of the company get the standard promotional support.

### **Suggestions for Further Research.**

1. This research found out that the perception of service quality is a factor associated with satisfaction and willingness to use the service of the direct selling company. Therefore, there should have the study about the quality of service in the direct selling company in order to improve the quality of service of the direct selling company to be better.
2. The results indicated that there are many opportunities to improve the quality of services of direct selling companies, including the issue about service providers and service clients, as well as links to the community and networks' health care. Therefore, to do the

research about how to develop and create the potential of the direct selling company is an interesting issue for further research, especially, the development of the media that support self-learning in order to promote independent direct sellers and to find the solution of frequency change of staff in the direct selling companies.

3. Since the direct selling companies have lots of employees, then there are many risk factors for health. Therefore, to link the health care policy for employees and safety at work are the issues that should pay attention to study about the risk factors and risk management of direct selling companies.

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## Lesson Study and Open Approach: Creative Thinking of Students in Mathematical Problem Solving

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### Abstract

The aim of this research is to explore creativity thinking ability of students in the classroom in solving mathematical problems using Lesson Study and Open Approach of Inprasitha (2011). This study is a qualitative research emphasizing a protocol analysis and analytic description. The target group is the students in the first grade of Demonstration Primary School in Pakse Teacher Training College, Lao People's Democratic Republic in the second semester of the academic year 2020-2021 with two groups of students, 4 students in each group. The tools used to collect the data include sets of lesson plans, video recording, sound recording, pictures by using the framework of Guilford (1967).

The findings found that: In the context of using Lesson Study and Open Approach in teaching and learning process emphasizing the students to learn by themselves and to learn cooperatively with friends in the classroom, it has been found that the students have ability to express their thinking in many types and students' creativity thinking can be found as follow:

1. Originality: is the unique thinking of an individual student that is different from other friends' occurred while solving mathematic problems independently in a group. 2. Fluency: is the thinking that each student brings into the group to discuss and give reasons to the problem together independently. 3. Flexibility: is the thinking that students can adjust or modify after they discuss, examine and get feedback from classmates and from the teacher. 4. Elaboration: is the thinking that students see as the importance when they present or summarize their work with their teacher because it is the top concept of the lesson in each class. This concept can improve or enrich the thinking of some students that is not completed enough. It is as a tool for students to apply in the next lesson.

**Keywords:** Creative thinking, Problem Solving, Lesson Study and Open approach

## Introduction

The framework of teaching and learning for 21<sup>st</sup> century (P21) has set learning skills into three skills including: life and working skills, learning and innovation skills, and communication, information and technology (ICT) literacy. In addition, students have to be able to read, write and calculate under the standard assessment and evaluation, curriculum, teacher development and learning environment for higher education. The higher education is also responsible for building and developing learning skills to be used in the whole life for all that include critical thinking and problem solving skills, creativity and innovation skills, cross-cultural and understanding skills, collaboration, teamwork and leadership skills, communication, information and media literacy, computing and ICT literacy, and career and learning skills (Partnership for 21<sup>st</sup> Century Skills, 2011).

It can be concluded that creativity skill is very important to improve the learners in the new era as Isaksen, Dorval and Treffinger (2011) mentioned that the creativity skill is the nature of all human beings, it does not only occur with talent people. People's creativity skill may differ from each other or may exist in different levels. The results from learning or practicing to understand the use of creativity skill will be a primary thing to motivate people to be interested in and they can develop themselves to gain creativity skill. Creativity skill has high flexibility and deep relationship with the content of a matter (Silver, 1997). In the current situation, creativity skill in mathematics is most important and essential for each learner (Mann, 2005). Moreover, Gagne (1985) pointed out that creativity skill is one of problem-solving abilities. It is a combination of ideas and different sources of knowledge that can be said creativity skill is the problem-solving ability in a high level. In addition, Guilford (1973) stated that the connection between creativity skill and problem-solving skill is a direct connection which the creativity skill is a final outcome of the problem-solving process.

Therefore, teaching and learning emphasized on problem-solving process is to promote learners to develop their creativity skill by themselves. Polya (1957) defined that problem-solving means to find methods or ways to overcome the difficult obstacle and to reach the goal which those methods and ways are not easily occurred or spend only a short period. As a result, the ability in solving problems is the skill and process of learning that needs the learners to practice to make it happened in the classroom and can also be used in the real life situation (Jonassen, 1997). In addition, Krulik & Rudnick (1993) and National Council of Teachers of Mathematics (2000) inserted that problem solving is a participation in the process of solving the problem that people use their experiences, knowledge, skills and previous knowledge to find the solution of a new problem that they are not familiar with.

From the previous until now mathematics teaching and learning in Laos, most teachers do not emphasize on the process or problem solving process for students, they use teacher center method to transfer knowledge to students and this results in most students are lack problem solving and thinking skills and the teaching and learning in general does not achieve the goal (Khammeuangkhoun, 2017). In addition, mathematics' teaching and learning in schools mainly consists of three characteristics namely: 1) The situation of mathematics presented in the classroom: the contents of mathematics in the textbook mainly do not relate to or reflect the situation happened in the real life. 2) The contents of mathematics mostly emphasize on calculation to find out the final answer rather than emphasize on the process or important ideas of learner such as: exploration, evaluation, synthesize, analyze, define and etc. 3) The learners are limited representation and problem-solving process (Kouba & Frankin, 1993). As a result, mathematical learning and teaching in the school, teachers mostly depended on teaching materials from textbooks. They tended to follow contents and activities in the textbooks such as teacher giving examples then they let student to practice and give homework to students at the end of class time. It could be said that teaching mathematics is like talking about mathematics and implied teaching expected only high scores in the examination. In almost classes, teachers applied the same methods and did not realize mathematical thinking process. Therefore, students were lack of creative thinking (Inprasitha, 2010).

Lesson study is an innovation to develop teachers' work in Japan as working collaboratively in order to improve the quality of teaching and learning continuously and gradually. It is a collaborative work of teachers that they share their teaching experiences and knowledge together to plan a lesson that is most appropriate for their students (Yoshida, 2005). Lesson study has been applied in several countries around the world. It was first brought to Thailand and Laos in 2002 with the purpose to give a new professional development to the teachers that includes 3 steps namely 1) Collaboratively design a research lesson (Plan), 2) Collaboratively observe the research lesson (Do) and 3) Collaboratively discuss and reflect on the research lesson (See) by integrating with the Open Approach as a teaching methodology in the second step of Lesson Study.

Open Approach means to teach students to open their minds. It is as a gateway for students to be able to think in solving the problem. It is to develop the thinking skills and meaningful activities for students, and to promote the thinking in mathematical problem solving creatively and independently (Nohda, 2000). In addition, Inprasitha (2011) said the Open Approach is a teaching approach that emphasize on students thinking through problem solving by learners' themselves that consists of 4 steps: 1) Posing the open-ended problem. 2) Students' self-learning. 3) Whole class discussion and comparison. 4) Summarization through connecting students' mathematical ideas emerged in the classroom.

Teaching and learning using Lesson Study and Open Approach is a teaching approach that widely accepted especially to develop students' thinking. In Laos, the Ministry of Education and Sports has a strong support for this concept to develop the quality of teaching and learning. Particularly, the Demonstration School in Pakse Teacher Training College, Laos PDR has introduced this approach since 2017. Therefore, the researchers want to explore the creativity thinking of students in the mathematics classroom using the concept of Lesson Study and Open Approach to guide the development of teacher teaching.

## Objective

To explore the creative thinking of students in mathematical problem solving by using Lesson Study and Open Approach in Demonstration primary school, Pakse Teacher Training College, Lao PDR.

## Literature Review

Creative thinking of students in mathematical problem solving means the thinking of students that is the product from the problem solving process based on the concept of (Guilford, 1967: 62) includes: 1) Originality: is a unique thinking of an individual that differ from the others'. 2) Fluency: is quantity of thinking that is not repeated. This might be, for example, the ability to speak many languages in a certain time. 3) Flexibility: is thinking that an individual can adjust and sort the importance of a situation more than one thing. 4). Elaboration: is a thorough thinking that can improve the prior thinking to be more completed.

Mathematical problem solving means an action of students to solve the problem in the classroom with the teaching and learning using Open Approach of Inprasitha (2011)

Open Approach means a teaching approach emphasizes on students' thinking through mathematical problem solving based on four steps of conceptual framework as follows:

1. Posing open-ended problems.
2. Students' self-learning.
3. Whole class discussion and comparison.
4. Summarization through connection students' mathematical ideas emerged in the classroom.

Lesson study means teachers' collaboration to make the lesson plan, to create Open-ended problems and to concept expectation that resulted in students' creative thinking in problem solving. There are 3 processes of lesson study according to Inprasitha (2011) as 1) Collaboratively design a

research lesson 2) Collaboratively observe the research lesson and 3) Collaboratively discuss and reflect the research lesson.

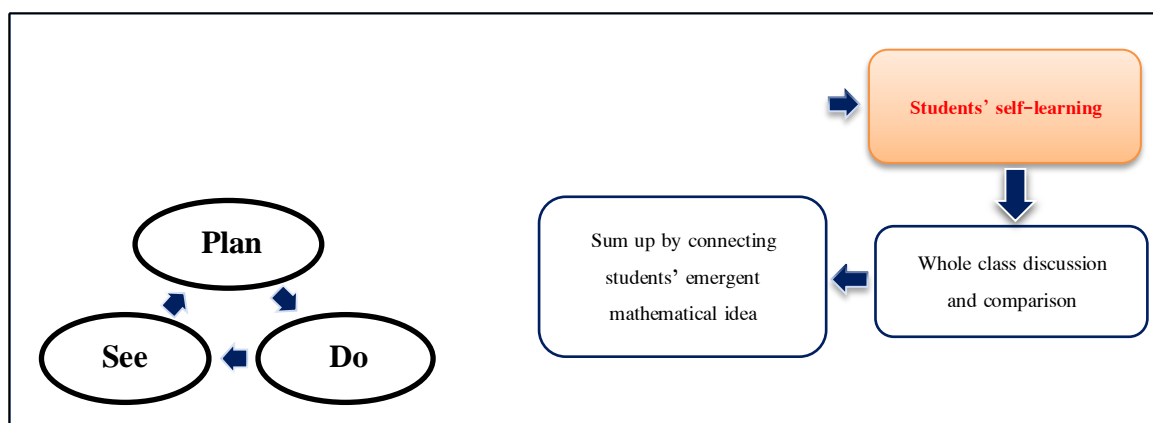
## Research Methodology

### Research Population

The target group in this study was the first year of an elementary school. It is a Demonstration primary school of Pakse Teacher Training College, Lao PDR. It conducted in the second semester, the academic year 2017-2018. This study was purposive sampling. It divided into two groups of students; there are four students in each group. The total number is 8 students. The classroom design is just like the normal class that the target group is not separated from the other students in the class.

### Conceptual Framework

This research is a classroom research using qualitative research method emphasizes on protocol analysis and analytic description by concept of Lesson Study and open Approach (second step) Inprasitha (2011).



**Figure 1:** Lesson Study and Open Approach based on the concept of Inprasitha (2011)

### Research Tools

1. Lesson plan: the research team collaboratively created 5 lesson plans which each plan made based on the conceptual framework of Lesson Study and Open Approach by Inprasitha (2011).

2. Video recorder: used to record focused groups of students to see their behavior, movement and reaction during the second step of Open Approach. There were two video recorders for two focused groups.

3. Audio recorder: used to record communication sound of students during their group problem solving by using two sound recorders for the two groups.

4. Camera: used to photo students' work, activities, reaction and behavior in problem solving.

5. Students' worksheet

6. Semi-structured observation form: a research assistant used semi-structured observation forms to note thinking and behavior about behavior and students' thinking in the step of they solve the problem.

### **The data analysis:**

The data analysis in this study was qualitative data analysis, protocol analysis, and descriptive analysis. The data obtained from semi-structured observation form, including taking photos, audio and video recording, writing tasks and observation of the two groups. The data were analyzed to find out the behavior of students appeared in each process based on Lesson Study and Open Approach Conceptual Framework of Inprasitha (2011).

### **1.Collaborative planning the lesson**

The research team collaboratively plans the lesson, analyses contents of the lesson and sets the purposes of the lesson. The team also designs open-ended situation related to the real world, meaningful for students and various possible ideas of students in order to make them interested in the lesson, understand the problem and ways to solve it. After that, the research team collaboratively expects students' ideas and creates teaching materials that is most meaningful for the students. This also includes giving the responsibility to support the teaching of the teacher and setting the goal to observe the thinking of students and to record creative thinking of students that occurs from solving the problem.



**Figure 2:** A picture of planning the lesson of the Lesson Study team

### **2.Collaborative observing and recording students' ideas**

In this step the research team brings the lesson plan to teach and observe the class to record students' ideas in solving the problem.

#### **Step 1: Posing open-ended problem:**

- |          |         |   |
|----------|---------|---|
| Item 25: | Teacher | After we already talked about the old lesson from yesterday, today the teacher has something to show you. Are you really? |
| Item 26: | Student | Yes, I am ready.  |
| Item 27: | Teacher | Everyone! Look at the board<br>(Teacher puts the picture on the board)<br>Do you know what it is and how will we do it?   |



**Figure 3:** A picture of a number board for students to do their study activities.

- Item 28: Student Table of numbers.  
 Item 29: SA2 Write number  
 Item 30: SB1 Add number into the empty boxes  
 Item 31: SC2 Put the number to complete the table, the winner will get the price  
 Item 32: Teacher Sure, very good all. Next everyone, look at the questions to answer and read them together.


Questions: Put the numbers into the blanks.

1. How many 7s are there in the one unit position?  
.....
2. How many 8s are there in the tens unit position?  
.....
3. What number is it in the star position? .....

⇔

ຄໍາສັ່ງ: ຈົ່ງຕື່ມຈຳນວນໃນຫ້ອງຫວ່າງຂອງຕາຕະລາງ

1. ເລກ 7 ທີ່ຢູ່ໃນຕໍາແໜ່ງຫົວໜ່ວຍ ມີຈຳນວນໃດແດ່?
2. ເລກ 8 ທີ່ຢູ່ໃນຕໍາແໜ່ງຫົວສິບ ມີຈຳນວນໃດແດ່?
3. ຈົ່ງບອກຈຳນວນທີ່ຢູ່ໃນຕໍາແໜ່ງສູບ ★ ແມ່ນເລກຫຍັງ?



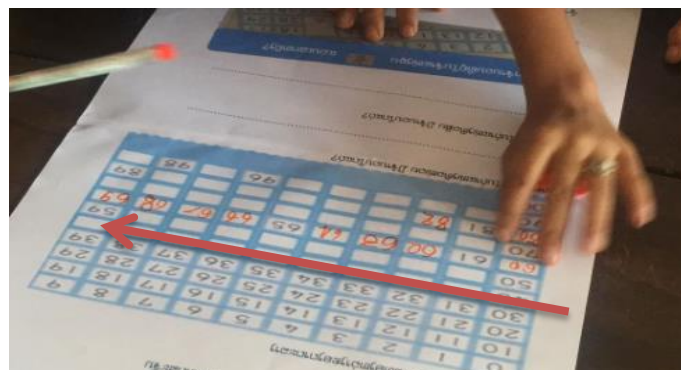
**Figure 4:** Sample images of questions used in the testing activities.

- |         |         |   |
|---------|---------|---|
| Item 33 | Student | 7s are there in the one unit position and 8s are there in the tens unit position (Read the questions) |
| Item 34 | Teacher | Every one understands how to do?  |
| Item 35 | Student | Yes   |
| Item 36 | Teacher | Each group comes out to pick the work sheet.  |

From the episode, in item 27 the teacher presents the material to students by putting it on the board that can be seen clearly. Students try to observe the picture then they try to understand the problem and predict what they will do in many ways such as: Item 29: SA2 said “Write number”, Item 30 SB1 said “Add numbers into the empty boxes” and Item 31 SC2 said “Put the number to complete the table, the winner will get the price”. It can be seen that in this point students try to understand the goal to do the activity with many different ideas that are not repeated. In addition, students also try to understand the questions presented in Item 33.

### Step 2: Students’ self-learning:

- |              |     |  |
|--------------|-----|--|
| Item 40:     | SB1 | We will put the number for all boxes   |
| Item 41:     | SD1 | Zero, one, two, three ... nine. Look at this first row. It has number from zero to nine. (using finger to count) |
| Item 42:     | SA1 | We do not have to look at the row, just put into the empty box, any row.   |
| Not Item 43: | SC1 | Put this one first better<br>because it has a number<br>in the middle  |

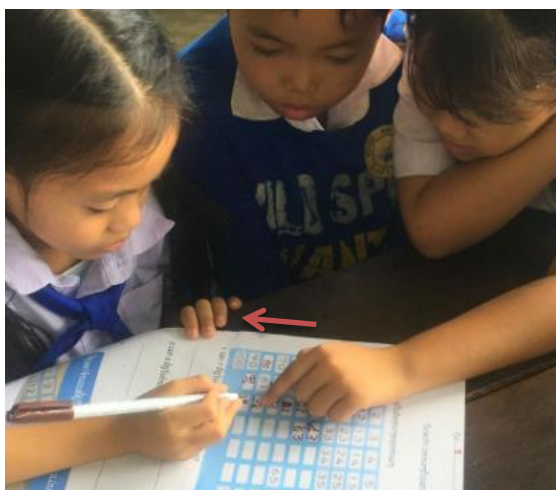


**Figure 5:** Guidelines for adding numbers

The episode from item 40 to item 43: it shows students solving problem by themselves. In each group, students work cooperatively to help each other that each student shows idea to help in solving the problem. For example, Item 4, SD1 said “Zero, one, two, three ... nine. Look at this first row. It has number from zero to nine. (using finger to count)”. This indicates an idea from observing an increasing of the number in a row. Moreover, in Item 42, SA1 said “We do not have to look the row, just put into the empty box, any row”. From this activity sheet, it shows that this group of students has a basic idea as adding the number from the left to the right.

#### Related protocol

Item 50:	SC2	Look at this we can add this way. From up here down to the bottom.
Item 51:	SD2	It can be, too. Which one will be faster?
Item 52:	SC2	See, add like this faster. The front numbers are increasing, it is the same number.
Item 53:	SA2	Yes. So we write the front number first it is faster
Item 54:	SD2	Alright then we write the back numbers because they are the same.

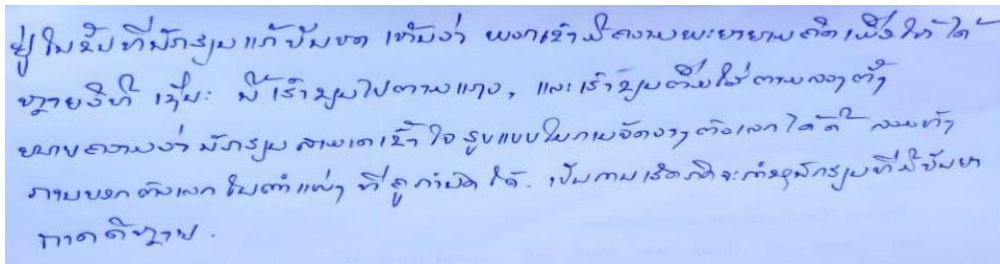


**Figure 6:** The students began to carry out number addition activities according to the teaching and learning model.

The episode from item 50, SC2 said “Look at this we can add this way. From up here down to the bottom”. It means this student has found a new way to solve the problem by noticing the pattern of number, then tells other friends in the group to do. In addition, there is an idea that tells the easy way and can write quickly as the episode from item 52, SC2 said “See, add like this faster. The front numbers are increasing it is the same number.

From the Semi-structured observation of the research team, it is also found the similar data.





**Figure 7:** In the students self-learning step, it found that students try to think to solve the problem in many ways such as: students can fill number in the box by a pattern in a row and a column. This means student understand the pattern and number position and they enjoy doing this activity.

### Step 3: Whole class discussion and comparison:

- Item 62: Teacher Now, let's listen to the presentative from group 1 presenting about how they complete the task.
- Item 63 SA1 First, we add number into the box from left to right.  
Then, number 7s in the unit position are 7, 17, 27, 37, 47, 57, 67, 77, 87 and 97
- Item 64: SB1 The number 8s in the 10 units are 80, 81, 82 until 89
- Item 65: SA1 The number in the star box is number 27.



**Figure 8:** Image of an example of adding a numerical answer.

- Item 66: Teacher This is the way to complete the task from group 1. Now I would like each group compares the way to complete the task of group1 to the way of your group, what are the same and what are the differences?

From the episode, Item 62 to Item 66 are time to present ideas to solve problems in the classroom. It can be seen that students are brave to explain their ideas or the ways to solve the problem of their own group. Each of them in the group also takes responsibility to explain. For example, Item 63, SA1 said “First, we add number into the box from left to right. Then, number 7s in the unit position are 7, 17, 27, 37, 47, 57, 67, 77, 87 and 97” and Item 64, SB1 said “The number 8s in the 10 units are 80, 81, 82 until 89”.

#### **Step 4: Summarization through connection students’ mathematical ideas emerged in the classroom.**

- |          |         |  |
|----------|---------|--|
| Item 71: | Teacher | Everyone, let’s see together how many ways we can add the numbers?                                 |
| Item 72: | Student | Add in a row (from left to right)  |
| Item 73: | Teacher | What are the other ways? Let’s see together.   |
| Item 74: | SA1     | Add in a column from top to the bottom.  |
| Item 75: | Teacher | So, we can add the numbers in two ways. Next, let’s see the number 7s in the unit. What are there? |
| Item 76: | Student | There are 7, 17, 27, 37, 47, 57, 67, 77, 87 and 97. It is a column.                                |
| Item 77: | Teacher | Next, let’s see the number 8s in the 2 units. What are there?                                      |
| Item 78: | Student | 80, 81, 82, 83, 84, 85, 86, 87, 88 and 89. They are in a row.                                      |
| Item 79: | Teacher | And what number is in the star box?  |
| Item 80: | Student | Number 27  |

From the episode, in item 71- Item 80 show that students can express their ideas with the teacher to summarize what they have learnt. For example, Item 72 student said “Add in a row (from left to right)”. And Item 74 SA1 said “Add in a column from top to the bottom.” It can be seen that students see the connection of the numbers in a row and in a column as the teacher only facilitates and motivates them to get their ideas.

### **3. Reflection.**

After finishing the class, the research team collaboratively reflected on the teaching to evaluate whether the teaching achieves its goals or not. Students have all types of creative thinking that arise during all teaching sessions by using Open Approach. The research team had observed what happened during the teaching, what to improve such as: situation problem, instruction, materials and questions in order to stimulate students to acquire the creative thinking and to bring all information to use in the next lesson.



**Figure 9:** A picture of reflexing after teaching

**Table 1** Creative thinking of students in mathematical problem solving

Teaching plan by concept of Lesson Study and Open Approach	Creative thinking (Guilford, 1967)				Note
	Originality	Fluency	Flexibility	Elaboration	
1	✓	✓	✓	-	
2	✓	-	✓	-	
3	✓	✓		✓	
4	✓	✓	✓	-	
5	✓	✓	-	✓	

From Table 1, the thought pattern model Creativity of students in solving mathematical problems to get results 4 privileges for students 1. Originality 2 . Fluency 3 . Flexibility 4.Elaboration In which students will receive all 4 aspects that are added.

## Discussion/Conclusion

The study on students' creative thinking in mathematical problem solving in the classroom using the concept of Lesson Study and open Approach of Inprasitha (2011) and teaching 5 lesson plans to find out four types of creative thinking of Guilford (1967). It can be found as follow:

1. Originality: is a unique thinking of an individual that is different from the others'. This type of thinking occurred in any lessons while solving mathematic problems independently in a group. This is because the teacher presented an open-ended problem that related to the real world of students before moving to mathematic world. This step is very important to make students be able to interpret and understand the problem situation clearly before completing the task. In addition, the teacher gave students an opportunity to solve the problem independently, so each student dared to express his/her idea in the group and the ideas from all students in the group were varied. This is in accordance with Inprasitha (2011), he mentioned that an open-ended problem or open-ended question allows various ideas. It challenges students, so they want to know and are interested in the things that they do not know before. The teacher presents this to the students through stories and visual aids.

2. Fluency: is a quantity of thinking that is not repeated. This can be an ability to say something in different ways. This can be found in the second step of open approach because this is the main step that students face the problem and they solve the problem by themselves. This is in accordance with Lithner (2010) asserted that when learners participate in mathematical problem, they will apply their mathematical knowledge to solve the problem and they also adapt their strategies suitably and they can use those strategies and experience to solve the problem numerously and a research of Khammeuangkhoun (2017) found that teaching and learning by using Lesson Study and open Approach, students have abilities to solve a problem using many ways of thinking.

3. Flexibility: is the thinking that students can see the importance of one situation more than one thing. This type of thinking can be found in Open Approach that relates to checking the differences of students' ideas while working together because the checking can help students adjust or modify the way of their thinking and they can accept each other's ideas as Polya (1957) cited in Inprasitha (2011), asserted that in the 4<sup>th</sup> step of problem solving: "Looking back" is very important that needs to work creatively and thoroughly because it looks back the idea, working process and strategies used from the beginning until the final answer.

4. Elaboration: is a type of thinking that is very neat and can modify students' former thinking to be more completed. This thinking can be seen when students solve a problem together. While solving the problem together, the idea of each student may be in the same point and can be contrasting that lead to reflection of one's own thinking. This reflection can bring about the more completed thought of the student. Moreover, in the conclusion step students can get the new idea or lesson to apply in the next lesson.

Lesson Study and Open Approach are an innovation to develop quality of the new teaching and learning in order to improve students' thinking skill through open-ended problem solving process. The finding from this study is very essential for teachers and students because one lesson plan that can make students able to have all types of creative thinking is very difficult or almost impossible, so the lesson study team and the teacher need to deeply understand the purpose of Lesson Study and Open Approach especially planning the open-ended problem, questions and all visual aids that related to the framework of Open Approach. This is to open students' mind in solving problem on their owns and to develop creative activities for students that enhance various creative thinking in mathematical problem solving independently (Nohda, 2000).

## Suggestion

The teacher who uses the concept of Lesson Study and Open Approach in teaching mathematics should set a goal of the lesson plan that emphasizes the development of some types of creative thinking, not all types of creativity thinking in one lesson plan.

There should be a study on teacher's role in teaching and teacher's ability in designing open-ended problems to promote students' creative thinking skill in many types.

## Acknowledgment

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2. In case of a research article, the method and findings should be presented systematically with the following components (the topic and components may vary).

2.1 Introduction: significance and background of the study together with overall view of the article.

2.2 Objective

2.2 Literature Review

2.3 Research Methodology: steps of doing the research, samples for the study, data collection, research instrument and statistics.

2.4 Research Finding

2.5 Discussion and Conclusion

2.6 References

## References

In submitting an article for consideration, you need to write citations of other documents or the sources of information used at the end of the article. By providing references only in English and categorized in APA style, the submitter should check the correctness and completeness of the citation in accordance with the criteria specified by the journal. Any articles on topics that have a citation format that has not yet been complied with the journal will not be forwarded to a qualified reader for reviewing in the next step. The submitter must adhere to the following main guidelines.

Example of APA style: <https://libguides.murdoch.edu.au/APA>

## Review Process

The articles to be published in the journal must have been approved by the editorial board and at least three experts in the related field of study following the process below.

1. The editorial board will keep the author informed when they have received the article according to the set criteria.

2. The editorial board will jointly examine the titles and the contents of the articles whether they are appropriate and consistent with the journal objectives including their quality in terms of theories and application in humanities and social sciences.

3. In case the editorial board do not receive the article for further step, they will keep the author informed of the rejection with some seasons and brief suggestions through the e-mail.

4. In case the editorial board accept the article, they will forward it to at least three experts in the related field for peer reviews and make decision whether to accept, reject or revise it. This is a double-blind process, where the experts and the article authors will not know each other.

5. After the experts have reviewed the article, the editorial board will make decision based on the suggestions made by the experts whether it should be published in the UBRU INTERNATIONAL JOURNAL or return to the author for major/minor revision or rejection.

6. Once the editorial board have examined the article revised by the author according to the experts' suggestions, they will keep the author informed of accepting it for publishing in the UBRU INTERNATIONAL JOURNAL.

## Paper Submission

Those who wish to submit an article for review in the journal, please send the original file (Microsoft Word) in English using the Times New Roman font, size 12 point only. (Text Size: Research Topic 18, Topic in Journal 14, Journal Content 12). The channel for submitting the article is ThaiJo system. <https://so04.tci-thaijo.org/index.php/ubruij/login>