

## Learning Style Preference and Instructional Strategy for Enhancing Potential of ASEAN Graduate Students in Thai Higher Education

Ieng Sovath<sup>1</sup>, Amornrat Wattanatorn<sup>2</sup>, Wichian Thamrongsotthisakul<sup>3</sup>

### Abstract

This research aimed to 1) find out the dominant learning style preferences of ASEAN graduate students using for learning in Thai Higher Education, 2) investigate how ASEAN graduate students learn with their dominant learning style preference at Naresuan University, and 3) propose the appropriate instructional strategies for ASEAN graduate students in Thai Higher Education. The study was presented in 3 main steps based on research objectives. Step I, there were totally 225 respondents were selected from all ASEAN graduate students in Thao Ngam Network (Naresuan University, Burapha University, Mahasarakham University, Taksin University and Srinakharinvirot University) who enrolled in the first semester of academic year 2012 and 2013, in master's degree. The research instrument was learning style preference questionnaire adapted from Peter Honey and Alan Mumford (1992). Step II, There were totally 29 ASEAN graduate students who enrolled in the first semester of academic year 2012 and 2013, in master's program at Naresuan University. After checking the learning style preference scores among four types of learners, 12 respondents whose learning style as reflectors were selected as participants for interview. Step III, the proposed instructional strategy was done with five main stages as follows: First, it was to identify the characteristics of learning style preference. Second, it was to classify the result of data from respondents as learning strategy. Third, it was to suggest instructional strategy. Fourth, it was to be verified by 5 experts and then the data were analyzed by using statistic as Median and Inter-Quartile Range (IQR) with Standard Criteria: Median > 3.51, IQR < 1.50 to be consensus. Fifth, it was to modify suggested instructional strategy.

The findings summarized as follows:

1. The dominant learning style preference among ASEAN graduate students was categorized as four types of learning style preferences, Activist, Reflector, Theorist and Pragmatist. From the total number 225 ASEAN graduate students, the researcher received 74.66% of respondents. So there were 168 respondents replying to questionnaire. The result from data analyzing showed that the majority of learners was Reflectors (39%) and followed by Pragmatist (25%), Activist (20.83%) and Theorist (14.88%). From 66 reflectors among 5 Universities, there were 12 respondents whose learning styles were reflectors at Naresuan University, so they were selected as the participants for interview in the next step of study.

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<sup>1</sup> M. Ed. in Curriculum and Instruction Faculty of Education, Naresuan University

<sup>2</sup> Asst. Prof. Dr. in Curriculum and Instruction Faculty of Education, Naresuan University

<sup>3</sup> Dr. in Curriculum and Instruction Faculty of Education, Naresuan University

2. After 12 reflectors were interviewed about how to learn, The result was classified into key attributes as 1) being ready and well-prepared 2) being thoughtful 3) being cautious 4) being a good listener and making an observation 5) being thorough and methodical 6) making a conclusion. The data were learning strategies of ASEAN graduate students in Thai Higher Education which would be used to propose appropriate instructional strategy.

3. The suggested strategies were proposed from learners' learning style preferences and learning strategies which there were 36 items within 9 steps of instruction. The result of data analysis showed that there were 35 items which were consensus and another item was non-consensus, since it was higher than the criteria (IQR=1.96). Eventually, those suggested strategies were modified as ASEAN strategy: (A= Attraction, S= Stimulation, E= Engagement, A=Assessment, N= Notation) along with process of activities in each step.

**Key words:** Learning Style/ Instructional Strategy/ ASEAN graduate student/ Higher Education

## Introduction

Enhancing learners to achieve their own potential is needed to identify the main important factors namely learners, instructors and learning process with the primary focus on engaging students in a process that best promotes their learning (Kolb, 1984). It has been the truth that learners are the most important and influential on learning and teaching process.

The 15-Year National Plan for Higher Education Development from 2008 to 2022 formulated by Office of the Higher Education Commission (OHEC) has shown that Thailand plan to become regional education hub in South-East Asia with the aim of increasing the number of foreign students in Thailand up to 100,000 from the current figure of 20,000. The international student population is one of factors that contribute to the educational development of host institutions and host destinations. All universities need to promote and improve curriculum and instruction towards the current change and also offer effective program that stands out among competitors (Laddawan Jianvittayakit, 2012, p.172).

In terms of current research trends, there have been the studies conducted on learning style

preference and instructional strategy. It employed the appropriate instructional strategies to enhance learning and teaching quality. Instructional designers should include strategies that appeal to all learning styles of learners (Wein Penyen, 2004, p.100). The research findings showed that there was no match between the teaching and learning styles in instructional process (Sabeh Ghada, Bahous Rima, Bacha Nahla Nola, and Nabhani Mona, 2011). There is disparity between the ways teachers taught and the ways students learnt and the traditional methods like lecturing the lessons still dominated in subjects. The learning style has strong implication for pedagogy in higher education in which university should encourage teachers to do research in the area of learning styles and instructional methods (Sirirat Chaunkamnerdkarn, 2006, pp. 218-220).

In conducting research on learning styles and instructional strategies, the information of students' learning style preference would be available to design teaching and learning processes by matching with appropriate instructional strategies. Thus, it is not surprising that learner possesses the learning style preference and influent instructional process. Lim Lum Peng

(2002) studied the application of learning style in instructional strategies and generally agreed that the understanding of the dominant learning preference was possibly suggested to effective instructional strategies to facilitate process of instruction as well as to capitalize on the individual's potential.

Due to the significance and reasons above, this research tend to find out how the ASEAN graduate students learn and how they learn with their dominant learning style. This study will be the guidelines for proposing effective instructional strategies

### Objectives

1. To find out the dominant learning style preferences of ASEAN graduate students use for learning in Thai Higher Education.
2. To investigate how ASEAN graduate students learn with their dominant learning style preference at Naresuan University.
3. To propose the appropriate instructional strategies from the dominant learning style preference of ASEAN graduate students in Thai Higher Education.

### Methodology

The study was conducted in 3 main steps as follows:

**Step 1:** To answer the first research objective, the total 225 respondents were purposely selected from all ASEAN graduate students in Thao Ngam Network which included Naresuan University, Burapha University, Mahasarakham University, Taksin University and Srinakharinvirot University, who enrolled in the first semester of academic year 2012 and 2013, in master's program.

The research instrument was learning style preference questionnaire adapted from Peter Honey and Alan Mumford (1992). It was a self-

reporting questionnaire. All of the items in questionnaire were relevant to how the learners perceive their learning style which comprising four types of learner, Activist, Reflector, Theorist and Pragmatist. There was no "right" or "wrong" answer in each question, if he or she agrees more than disagree with a statement, put a tick (✓) in the box. If he or she disagrees more than agree with a statement, put a cross (x) in the box, also be sure to mark each item with either a tick or cross. Before using this questionnaire, the researcher checked the reliability of the tools and the Cronbach Alpha Coefficient was calculated in category: (Activist = 0.68), (Reflector = 0.744), (Theorist = 0.638), (Pragmatist = 0.70). It showed the moderate score of reliability.

Learning Style Questionnaire was analyzed by using the standard scoring provided by Honey and Mumford's norm. It was scored by awarding one point for each ticked item. There were no points for crossed items. After each respondent was checked, the total of respondents was calculated by Excel Software as percentage of the respondents with dividing into four types of learning style preference included Activist, Reflector, Theorist and Pragmatist in order to find out the majority of dominant learning style preference among ASEAN graduate students.

**Step 2:** To answer the second research objective, the total 29 ASEAN graduate students who enrolled in the first semester of academic year 2012 and 2013, in master's program at Naresuan University were selected. After checking the learning style preference scores among four types of learners, the dominant learning style was selected as participants for interview.

In-depth interview form was developed from the findings of dominant learning style preferences in the first objective of research. Before using, the research tool was submitted to 5

experts who were qualified and specialized more than 5 years of experiences in educational area to check the content validity. The result of checking IOC was 0.80-1.00. The interviewed data was analyzed by utilizing content analysis with assigning the meaning to words, phrases and paragraphs and then group relevant segments to draw conclusion within the context of sample questions. The result of data analysis was classified as key attributes.

**Step 3:** To answer the third research objective, the proposed instructional strategy was processed in five main stages as follows: 1) to identify the characteristics of learning style preference 2) to classify the result of data from respondents as key attributes 3) to suggest strategies 4) to be verified by 5 experts and then the data was analyzed by using statistic as Median and Inter-Quartile Range (IQR) with Standard Criteria: Median > 3.51, IQR < 1.50 to check the data were consensus or non consensus 5) to modify suggested instructional strategy.

## Results

1. From the total number 225 ASEAN graduate students, the survey response rate was 74.66%. So there were 168 respondents replying to questionnaire and then the learning style preference among ASEAN graduate students studying in master's program starting from academic year 2012 to 2013 at 5 Universities in Thoa Ngam Network (Naresuan University, Burapha University, Mahasarakham University, Taksin University and Srinakharinvirot University) in Thai Higher Education was categorized as four types of learning style preferences, Activist, Reflector, Theorist and Pragmatist. The result showed that the majority of learners was Reflectors (39%) and followed by Pragmatist (25%), Activist (20.83%) and Theorist (14.88%). From 66 reflectors among 5

Universities, there were 12 respondents whose learning styles were reflectors at Naresuan University, so they were selected as the participants for interview.

2. After 12 reflectors were interviewed, the data were divided into 2 parts as follows:

2.1 The profiles of the respondents were reported in terms of Gender, Age, Country and Field of study. Among 12 respondents, there were 7 males and 5 females. There were seven respondents in the age range of 20 to 29 years old as 58.3% and three respondents in the age range of 30 to 39 years old as 25% and two respondents in the age range of 40 to 49 years old as 16.6%. From the majority of respondents, there were 4 Indonesian followed by Cambodia, Myanmar, and Vietnam and Lao. The high number of total respondents is from Faculty of Humanities following by Faculty of Business, Economics and Communications, School of Renewable Technology, Faculty of Agriculture, Nature Resources and Environment and Faculty of Public Health.

2.2 The data of how to learn were classified into key attributes as 1) being ready and well-prepared 2) being thoughtful 3) being cautious 4) being a good listener and making an observation 5) being thorough and methodical 6) making a conclusion. The data were learning strategies of ASEAN graduate students in Thai higher Education which would be used to propose appropriate instructional strategy.

3. There were five main stages to propose instructional strategy as follows:

First, to identify the learning style preference, it was the learner's diagnosis which found out through respondents' learning style preference. The findings showed that it was kind of reflector whose dominant style of learning carrying with characteristics as readiness,

observation, preparation, thoughtfulness, cautiousness and conclusion.

Second, to classify the data interview as: 1) being ready which included the characteristics of readiness, well-prepared instruction, well-presented, and without pressure in making decision, 2) being thoughtful which included the characteristics of learning by doing reflection, reviewing, thoughtful conclusion, and searching relevant journals or information, 3) being cautious which included the characteristics of learning by thinking carefully before taking action, and setting priority, 4) being a good listener and making an observation which included the characteristics of learning by keeping listening first, and fully attention to group discussion, 5) being thorough and methodical which included the characteristics of learning by using graphic organizer, prior agreement group working and learning achievement goal setting, and 6) making a conclusion which included the characteristics of learning by having much sources of learning, and plenty of time for concluding things.

Third, to suggest instructional strategy through the result of respondents' learning strategies, it was the interviewed result about how to learn. The researcher proposed the instructional strategy by employed instructional events from (Gagne, Briggs, and Wager 1992) as guideline to back up the process of instruction. The 9 steps included gaining attention, informing learner of objectives, stimulating recall of prior learning, presenting the content, providing learning guidance, eliciting the performance, providing feedback about performance correctness, assessing the performance, enhancing retention and transfer.

Fourth, to be checked by 5 experts and then analyzed by using statistic as Median and Inter-Quartile Range (IQR) with Standard Criteria: Median > 3.51, IQR < 1.50 to be consensus. Among 36 items within 9 steps of instruction, there were

35 items which were consensus and another item was non-consensus.

Fifth, modifying the instructional strategies as ASEAN strategy: (A=Attraction, S= Stimulation, E=Engagement, A=Assessment, N=Notation). There were 5 steps of instruction in ASEAN strategy as follows: 1) Attraction: It was to attract learners with various strategies to get learners ready for setting up objectives. 2) Stimulation: It was to inspire learners to get curiosity of new knowledge and recall prior knowledge. 3) Engagement: It was to engage what learners have known to new knowledge with curiosity and all learning activity must be linked and done with reflection. 4) Assessment: It was to assess how well learners learn or understand new knowledge by various types of tests and strategies. 5) Notation: It was to keep or save their learned knowledge and make it in long-term evidence. Therefore, there were 5 steps with 15 items in the process of instructional strategy.

## Discussion

1. From the result of the dominant learning style preferences of ASEAN graduate students, 39. 28% was found as Reflectors while 14.88% was Theorist. It showed that the majority of learners were Reflectors which carry with the keywords as readiness, observation, preparation, thoughtfulness, cautiousness and conclusion; whereas Theorist got the lowest rate among four leaning style preferences. These two learners' characteristics are comparable that ASEAN graduate students tend to observe and be careful with new situation. They do not try to be perfectionists as theorists but attentively ready for new knowledge.

Glauco De Vita (2001) conducted the study of learning style preference in a multicultural class of international business management and found

the cultural condition appeared in their background of learning. Reflectively, cultural factor appears to exhibit the learning style of ASEAN graduate students with the general perception of being quiet and reflective in the cautious manner of participation. Thus, it is possibly inferred that ASEAN graduate students tend to take time and stand back to check and seek more sources if the way they learn mismatch during instructional process.

However, through conducted research on using learning style knowledge to enhance student learning and skill development, a case study of hospitality education at a Thai University, Sirirat

Chaunkamnerdkarn (2006) also used learning style questionnaire as research tools from Honey and Mumford. The findings showed that learners preferred to learn thing as concrete. Reasonably, the respondents were Thai bachelor's degree students who were majoring in technical food and beverage. They need to learn and practice with testing, doing experiment and presenting the result of findings. Whereas, ASEAN graduate students pursuing master's degree in Thai higher education mostly were reflectors.

Through the characteristics of graduates at master level, they tend to learn by doing much research on theories or relevant document and then reflect, review and conclude. The specific requirements were the ability to synthesize and apply the result of research and new developments in professional practice through analyzing, developing and testing hypotheses. They will be able to communicate the results of advanced study and research through refereed publications to academic, professional and community audiences, according to National Qualifications Framework for Higher Education in Thailand addressed in November, 2006. Another reason, it might be ASEAN graduate students are foreigners who

need to be careful and make thorough decision with new environment in Thailand. So the cultural condition possibly affected their learning.

2. It was in-depth interviewing with ASEAN graduate students at Naresuan University. The results of the interviewing were classified as key attributes for the respondents. It focused mainly on how to learn which the respondents shared the learning strategies from what they experienced in learning at various faculties, Naresuan University. If a learner does not learn the way we teach them, we must teach them the way they learn (Rata Dunn, 2000). These learning strategies can be discussed as follows:

2.1 According to the respondents' profile, it was remarkable that the majority of them were in the age of 25 to 39 years old and there is no discrimination between male and female, since the gender appeared in quite similar number. During the interview, they had mentioned about high commitment towards learning, so they were ready and well prepared for class, but the characteristic of learning to accomplish in learning was the most important to be notified. Approximately 60 % of them managed to achieve task by listing down and set priority as a plan to do. They expressed that they were mature and curious enough towards new knowledge as well as new learning situation. Thus, the respondents started to seek out new knowledge by what they were interested or curious.

2.2 After interviewing about how to learn, the majority of respondents at Naresuan University mentioned the way they learn by doing reflection on document and review about what they have learnt. It was notified that ASEAN graduate student who were respondents in this study seem to follow this strategy of learning but most of them mentioned about time available for preparation, they

proposed that enough time would inspire them to work effectively.

It can be noticed in the study of Krongkarn Arunrutana (2008) conducted a research on the development of instructional strategies for enhancing the potential of higher education learners with different learning styles. The learners in higher education seem to seek out new techniques of learning or possess personal preferences to accomplish academic learning. From this study, the effectiveness of self-directed learning was proposed to all styles of learning through develop the effective instructional strategies to match the way learners prefer and the findings showed the effects of using instructional strategy on self-directed learning, learning achievement, learners' opinions, it was found that self-directed learning ability of all types of the learners increased with statistical significance at the level of .001.

From the result above, it could be considered as valuable concept to assist ASEAN graduate students in Thai higher education. Nevertheless, ASEAN graduate students addressed how to learn that achieving task with plenty of time availability motivated them to conceptualize carefully with what they intend to learn, moreover, they concern much more about source of learning. 80 % of them mentioned about NU library that they are able to access to useful links by E-journals, E-books, and other Free Databases. The English version works with them, because the respondents mentioned that they could speak a little bit Thai language but not read. However, some of ASEAN graduate students prefer to access to some universities' links in Thailand like Mahidol University, Chulalongkorn University and Chiang Mai University in order to get relevant document to their topics and also to know what topic is popular for new trend of research. It can conclude that online source is really needed and helpful for them,

because 30 percent of them mentioned that they rarely borrow thesis or books from NU library; mostly they just go to sit in library to use internet and search for online journals.

2.3 The result from interview showed the interesting point that the respondents learnt things carefully. They mentioned the techniques of learning such as standing back to learn more, double checking. Moreover, the majority of respondents expressed more idea about learning by setting priority as techniques of learning as process like list down things to do, identify with level of necessary, select the priority to accomplish. It is notified that ASEAN graduate students who carry style of learning preference as reflectors tend to learn new thing with concern, but make clear before taking action. To be careful with the right thing to do, the respondents as reflector always list the task down and manage with level of task as urgent, very important and important thing and then they start to set priority with those items carefully.

According to Ryan and Twibell (2000) Adaptation to a new culture or situation has four stages 1) honeymoon stage in the beginning, when they are excited by the novelty of the situation and they just know little of how things work in the new culture 2) disenchantment stage when they face the realities of the new culture 3) begin resolution stage when they try new behaviors in order to fit into the culture 4) effective functioning stage when they become comfortable in the new. Therefore, ASEAN graduate students are experiencing in new situation by using prior knowledge to interact with many factors influenced such as cultural background from family and cultural condition in new situation and tend to construct new understanding to be adaptable. They need to stand back, think carefully and make a choice for a good decision making. This information could help

them when the faculty or university prepares to internationalize among international learners and also classroom management to facilitate in instructional process.

2.4 From learning through listening better than quickly presenting, the respondents tend to learn from observing other first. They feel comfortable with clear presentation or instruction before starting work immediately. It indicated that ASEAN graduate students need detail information on how to do or start to learn. Some of them mentioned about experience of misunderstanding while learning in classroom. Furthermore, the respondents addressed about learning by fully attention to group discussion through observation. Mostly, the respondents mentioned group discussion was the effective instructional activity. This information will assist the instructor to set effective strategies for instructional process in ASEAN student's classroom.

2.5 From the result of respondents, it showed that ASEAN graduate students were strategic learners who learn methodologically to achieve in learning in Master Degree, because they have addressed useful learning techniques such as learning by using graphic organizer included building idea by mind map, brainstorming and summarizing. Learners absolutely have different ways in learning such as hearing and seeing, reflecting and acting, reasoning either logically or intuitively, memorizing and visualizing and drawing analogies; and either steadily or in small bits and large pieces (Felder and Silverman, 1988). However, graphic organizers seem to be what all respondents mentioned. They gave impression to effective visual learning strategies to how they can structure their thinking. It helps them in structuring learning project, classify ideas, examine the relationship, and conceptualize. That is, the learners must know how to learn and select the suitable

ones applying for learning achievement. Additionally, the respondents also talked about learning by setting a short and long term goal for learning achievement. Through the research findings, it showed that half of respondents mentioned about learning strategies by setting the goal. It was a short and a long term goal that is about how they plan activities or strategies. It suggested that ASEAN graduate students learn with forming their own steps of learning achievement by setting learning goal.

3. It was how to propose the appropriate instructional strategies for ASEAN graduate students'. Claxton and Murrell (1987) have shown that identifying a student's learning style and providing appropriate instruction in response to that style can contribute to more effective learning, so that the learners can achieve in academic year through all course work.

3.1 It is the learner's diagnosis which have found out through respondents' learning style preference as reflector among ASEAN graduation. For the reflector learning style, who prefer the learning style related to the reflective observation, they can be facilitated by the strategy of discussions, brainstorming, observations and reflective journals. They can do the reflection on content, ask question and discuss the content and the weakness for this kind of learner is that they may feel uncomfortable in learning activities that push them to make a quick decision and express opinions as suggested from the theory.

3.2 From the findings in the second stage was to classify the result of data from respondents as learning strategies. The key attributes from the respondents regarding the experience of learning style preference were classified. These can be guidelines for appropriate instructional strategies based on knowing how the respondents learn. According to Rao Zhenhui



(2001); Bentz (1974); Tripp and Moore (2007) stated that being aware of how student learn or their learning style will help them as well as create the right teaching style for them, because in the processes of instruction, lecturer can select methods and techniques to facilitate the learners, but the appropriate strategies of instruction come from how the student learn. Grasha (1996) contended that if lecturer were to help students learn, they should teach in a way that matches their students' learning style.

3.3 Through the learning characteristics which the researcher received from in-depth-interview about how to learn, it can be suggested in the steps of instruction by the key attributes of the respondents. Roberts (1977) stated that it is actually impossible to adopt instructional style which pleases everyone all the time; yet it is in needs for instructor to be ready to modify the strategy or method while this makes learners feel acceptable to teaching environment.

The above researchers suggested that the instructional strategies could not make all learners learn successfully, but modifying the strategies was the effective way to facilitate learners. It is how the instructor understands the learners. Ralph A. Terregrossa and Zhaobo Wang (2012) studied on how college instructors can enhance student achievement. The researcher examined the influence of learning styles on the achievement of college students. The results show that learning styles have a significant impact on student achievement.

Yilmaz Soylu and Buket Akkoyunlu (2009) studied on the effect of learning styles on achievement in different learning environments. The main purpose of the research was to investigate

the effect of learning styles on students' achievement in different learning environments. This result shows that the time and place of using a certain type of media is more important than the type of media used for the design of learning environments, because the style of learning preference influent learning achievement.

3.4 From the findings in forth stage, it was the result checking by 5 experts who are professionalized and qualified with instruction in Higher Education. Among 36 items within 9 steps of instruction, there were 35 items which were consensus and another item was non-consensus. It showed that learning by game is not appropriated to Master's level learners. Moreover, the learners who are reflectors tend to attend less with role play or game play activity.

## Suggestions

1. All theories of the learning style preferences were applied and accepted as the qualified tools in finding learning style preference. Therefore, the instructor can choose one of those tools to identify the learning style preference of learner with the appropriate level.

2. Only questionnaire with checklist does not cover deeply about how to learn. Interviewing is highly recommended, because it possibly receives some usefully unexpected result from the respondents and benefit to the research.

3. From the result of instructional strategy, it can be suggested to conduct the study on the effects of applying strategy, or to develop the instructional strategy with other different learning styles.

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