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Learning Styles and Learning Self-Efficacy of Nursing Students at The Royal Thai Navy College of Nursing, Naval Medical Department

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Abstract

The study was a descriptive research aiming at studying the learning styles and self-efficacy of 177 nursing students studying in the first year to the fourth year in the academic year 2012 at the Royal Thai Navy College of Nursing, Naval Medical Department. The variables in the study were experimental variables which were level of current study, hometown, willingness to enroll and learning achievement, and dependent variables which were 1) learning styles and 2) self-efficacy. The research tool used in the study was personal information questionnaire, Felder and Solomon's Index of Learning Styles Questionnaire, and self-efficacy measurement model. The data were then analyzed using One-way ANOVA and Chi-Square. The results were as follows : 1) Most of the nursing students were sensing learners in perception dimension (89.8 percent) while the rest of them were intuitive learners (10.2 per cent), and their self-efficacy was quite high ($X = 3.49$, $S.D. = .38$), 2). Year of current study was found significantly associated with self-efficacy at .05 level, 3) There was no significant association in learning styles and self-efficacy among students with different background, consisting of hometown, willingness to enroll and learning achievement.

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Keywords: learning styles; self-efficacy

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1. Background

The main mission of all education institutions is teaching, and education process involves in many elements including learners, teachers, education administrators, resources, relationships between teachers and learners and leaning environment Paitoon Sinlaratana (1982 cited in Kanjana Panyotee, 1999) pointed out that learning development requires understanding the characteristics and the nature of the learners. Teachers must take their background, interests, needs and learning styles into an account in order to maximize the effectiveness of leaning management and learning outcomes among the learners. Knowing the differences of learners' learning style help teachers manage their teaching appropriately, corresponding with the nature of learners, especially their learning style. Therefore, study and understanding on their learning styles is very important as this could facilitate teachers and institutions to respond to their various leaning needs and styles (Smock, 1998)

The Royal Thai Navy College of Nursing, Naval Medical Department had been development a 4 – year nursing program, aiming at reinforcing knowledge, competencies both in academic and nursing professional and ethical aspects, especially in building their responsibility to themselves, nursing profession and society. The nursing curriculum has been designed in accordance with the challenges and needs of the society. Moreover, a great attention has been paid to improve their learning behaviors to increase their ability of thinking, doing, analyzing, criticizing and giving logic opinions in order to be life-long learners and knowledge seekers. Therefore, the researcher were interested in studying on learning styles and self-efficacy of nursing students at the Royal Thai Navy college of Nursing to apply the data from the research findings to improve the effectiveness of education management of the nursing college.

1.1. Research purposes

1. To study learning styles and learning self-efficacy of nursing students of at the Royal Thai Navy College of Nursing
2. To compare learning styles and learning self-efficacy between the nursing students with different personal factors

1.2. Research Methodology

This study was a descriptive research aiming at examining learning styles and learning self-efficacy of nursing students at the Royal Thai Navy College of Nursing.

1.3. *Research population and samples:* 177 nursing students studying in the 1st to the 4th year in the academic year 2012 at the Royal Thai Navy College of Nursing

1.4. Studied Variables

Independent variables: Year of current study, hometown, willingness to enroll and Level of learning achievement. Dependent variables: Learning styles, learning self-efficacy.

1.5. Scope of the study

The scope of this research was to examine learning styles studying in the first to the fourth year nursing students at the Royal Thai Navy College of Nursing, Naval Medical Department in the academic year 2012

1.6. Research instruments

Part 1 : Personal Data Questionnaire (4 items) including Year of current study, hometown, willingness to enroll and learning achievement

Part 2 : Index of Learning Styles Questionnaire developed by the researcher based on Felder and Soloman's

Model (1998), consisting of 4 aspects with 11 items for each aspect (44 items)

Part 3 : Learning Self-efficacy Measurement Instrument (25 items) developed by the researcher based on the study of Thanabhorn Yaemsuda et.al.(2008) which was a 5-level rating scale.

Conceptual Framework

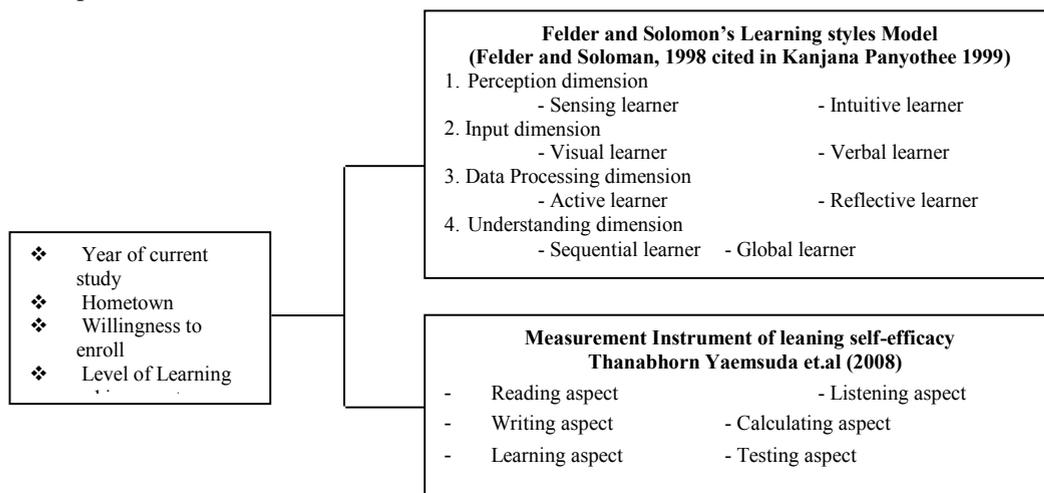


Fig1: Conceptual Framework

2. Research results

Part 1 : The analysis of learning styles, based on Felder and Soloman's Model of learning styles of nursing students at the Royal Thai Navy College of Nursing

In the Perception dimension, the majority of students were sensing learners (89.8%), while 10.2% were intuitive learners. In terms of the Input dimension, most of them were visual learners (81.4%) and 18.6% were verbal learners, For the Data Processing dimension, about 60% were active learners, and almost 40% were reflective learners, In the Understanding dimension, about 80% were sequential learners and the rest (20.3%) were global learners as showed in Table 1.

According to the data the average of learning self-efficacy was rather high ($\bar{x} = 3.49$, $SD = 0.38$). They perceived listening skill as the lowest level and testing skill as the highest level ($\bar{x} = 3.34$ and 3.73 respectively) as showed in Table 2.

Table 1 Numbers and percentages of the nursing students of the Royal Thai Navy College of Nursing classified by the 4 dimensions of learning styles

Learning styles	Level of learning styles			Total Number (n = 177) (%)
	Low (%)	Moderate (%)	High (%)	
1. Perception dimension				
1.1 Sensing learner	47 (26.6)	90 (50.8)	22 (12.4)	159 (89.8)
1.2 Intuitive learner	14 (7.9)	-	4 (2.3)	18 (10.2)
2. Input dimension				
2.1 Visual learner	30 (16.9)	16 (9)	98 (55.5)	144 (81.4)
2.2 Verbal learner	28 (15.8)	5 (2.8)	-	33 (18.6)
3. Data processing dimension				
3.1 Active learner	61 (34.5)	42 (23.7)	4 (2.3)	107 (60.5)
3.2 Reflective learner	50 (28.2)	8 (4.5)	12 (6.8)	70 (39.5)
4. Understanding dimension				
4.1 Sequential learner	78 (44.1)	58 (32.8)	5 (2.8)	141 (79.7)
4.2 Global learner	26 (14.7)	5 (2.8)	5 (2.8)	36 (20.3)

Table 2 Means, standard deviations of learning self-efficacy of the nursing students of the Royal Thai Navy College of Nursing

Item	Perception of Learning self-efficacy	Mean	S.D	Interpretation
1-5	Reading	3.46	0.47	Rather high
6-8	Listening	3.34	0.50	Rather high
9-10	Writing	3.38	0.52	Rather high
11-14	Calculating	3.45	0.64	Rather high
15-19	Learning	3.55	0.47	High
20-25	Testing	3.73	0.48	High
	Total	3.49	0.38	Rather high

Part 2 : The data analysis of comparison of learning self-efficacy of nursing students at the Royal Thai Naval College of Nursing, classified by year of current study, hometown, willingness to enroll and leaning achievement.

The data were analyzed by One-way ANOVA and the results show that year of current study was significantly associated with learning self-efficacy at level .05. There was no significant association between hometown, willingness to enroll and leaning achievement and learning self- efficacy.

Table 3 Comparison of leaning self-efficacy of the nursing students of the Royal Thai Navy College of Nursing, classified by year of current study, hometown, willingness to enroll and learning achievement

Variables	Overall learning self-efficacy		F	P-value
	X	SD		
Year				
1 st	3.70	.43	5.478*	.001 (1,2) (1,3) (1,4)
2 nd	3.46	.37		
3 rd	3.36	.33		
4 th	3.49	.36		
Hometown				
The North	3.30	.34	1.142	.340
The Central	3.54	.39		
The East	3.45	.37		
The North East	3.51	.34		
The West	3.42	.39		
The South	3.62	.51		
Willingness to enroll				
Self-Decision	3.48	.45	1.048	.353
Friends	3.30	.57		
Parents	3.45	.48		
Others	3.48	.51		
Learning achievement				
Low	3.00	.28	1.555	.142
Moderate	3.41	.47		
High	3.50	.47		

* P < .05

3. Discussion

1. For the learning styles of nursing students of the Royal Thai Navy College of Nursing Based on Felder and Soloman’s model (1998), most students were sensing learners in the Perception dimension, meaning that they prefer to learn from observation, action and problem solving in planned steps. They like nursing practice which requires carefulness and ability to work in a sequential manner under the standards of nursing profession issued by Thailand Nursing and Midwifery Council. The result corresponded with the study of Pichnaree Pitakawakard (2013)

which reported that nursing students must be able to recognize a rapid change, learn nursing procedures in particular steps and provide nursing care in accordance with nursing process and the professional standards. This also accorded with the study of Poontaree Pongsuwan et.al (1999) which found that the 3 most desired characteristics of nursing profession were good observation skill, care fullness and trustworthiness. The average of learning self-efficacy was rather high. This can be explained that the nursing students were confident in their learning ability. When factors related to learning management, learner focus concept and role model in the education institution are reinforced; it can contribute to greater leaning perception of leaning self-efficacy (Bandura 1986).

2. The data analysis comparing learning self-efficacy reveals that the nursing students with different year of current study had different level of learning self-efficacy and the first year nursing students had the highest level of learning self-efficacy. The finding can be explained that the first year nursing students had higher level of adjustment from high school education to military environment of the institution, leading to high learning expectation and goals. The result corresponded to the study of Khanitta Suwannit (1993) which found that factors directly related to learning self-efficacy were learning skills and experiences and those with indirect association were learning expectation and learners' anxiety.

3. There was no difference in learning styles and learning self-efficacy between the students with different location of hometown, willingness to enroll and learning achievement. According to Bandura (1994), learning self-efficacy is a determined ability when doing a particular behaviors and it is an important psychological factor for individuals to decide whether they should put their effort. It also depends on stress and anxiety of the learners. That means there may be others factors explaining differences in learning styles and self-efficacy among the learners.

4. Recommendations

1. A study on learning management model of the institution along with learning styles of the nursing students should be initiated to enhance the efficacy of teaching and learning management
2. Other research population such as nursing students in other college should be studied,
3. Other factors contributing to different learning styles and learning self-efficacy such as adjustment, psychological well-being should be examined to gain an insight of the issue which can be useful future education management

Reference

- Bandura, A. (1986). The explanation and predictive scope of self-efficacy theory. *Journal of social and Clinical Psychology*, 4, 359-373.
- Bandura, A. (1994). *Self-efficacy*. In V.S. Ramachaudran (ED.), *Encyclopedia of Human Behavior*
- Felder, R.M. (1998). Matter of Style. *LS-Prism.htm*. Available from www2.ncsu.edu/unity/lockers/users/f/felder/public/Paper:INTERNET.
- Panyothee, K. (1999). *Learning styles of the Students of Suranaree University of Technology Based on Felder and Solomon's Model*. Master's thesis. Higher Education Department. Chulalongkorn University.
- Pitakawakard, P. (2013). *The study of Characteristics of Nursing Students at the Royal Thai Navy College of Nursing*. Master's thesis. Faculty of Higher Education. Srinakarinwirot University.
- Pongsuwan, P. et.al (1999). *The Evaluation of Desired Characteristics of Nursing Graduates at Khon Kaen University*. Khon Kaen. Khon Kaen University
- Smock, R. (1998). How Can I Teach Effectively at the University of Illinois. *Tahandbk03.html#learnsty*. Available from www.oir.uiuc.edu/did/booklets/Tahandbk
- Suwannit, K. (1993). *Selected Factors associated to Expectation on self-efficacy among Primary School Students*. Master's Thesis. Psychology Department. Chulalongkorn University.
- Yaemsuda, T. et.al (2008). *The Analysis of Critical Thinking of Students in the Education institutions of the Royal Thai Navy*. Bangkok. Research Report. The Research and Military Development of Ministry of Defense.