

# **CHAPTER 1**

## **Introduction**

### **1.1 Historical Background**

Critical thinking and problem solving skills are among 21<sup>st</sup> century learning skills that everyone needs to learn from elementary school throughout their life (Vijarn Panich, 2012). Nowadays, critical thinking skill is crucial for nurses because the rapid changes found elsewhere can cause acute and chronic illnesses that affect health care services. Therefore, nurses being competent only on procedural skills are neither responding to meet clients' need nor providing effective care. It is essential that nurses can think critically by taking into account all relevant information to analyze client's health-related problem. Nurses need to look for information and evidence to support or refuse how to solve clients' health-related problems. Moreover, nurses need to be able to inform clients in order to encourage them to take part in their care.

Moreover, nurses need to be capable with medically technological advancement. Some clients perceive that using medical equipment means receiving better care. In order to provide effective care, nurses need to embrace not only procedural nursing skills but also critical thinking to execute each step of nursing process (Wilkinson, 2001; Vigitporn Lorsuwankul, 2001). Thus, Nurses are expected to think critically (Clarke & Holt, 2000). Critical thinking skill is believed to assure safety, efficacy and expertise in provided care. It is an important component of nursing practice, communication, and problem solving. Nurses are required to comprehend professional theoretical knowledge and evidence based understanding.

Critical thinking is the first skills for nurses because it makes effectively health care. Critical thinking skill is needed to develop during being nursing students by promoting reflective and comprehensive thinking in every aspect relevant to health of an individual. Since providing nursing care deals with life of an individual, clinical

judgment needs to be done in a timely manner, accurately, and most effectively for clients.

The Secretary's Commission on Achieving Necessary Skills (2011) identified critical thinking as knowing the way how to learn, to be reasonable, and to be creative. Alfaro-LeFevre (2010) stated that regarding nursing profession, critical thinking is more than problem solving. It is the proactive problem solving instead of solving problem at hand to prevent health-related problem and promote health. Nurses need to enhance their knowledge and skills used to improve quality of care in their work. Panita Wannapirun (2008) stated that critical thinking is a thinking process that employs information and knowledge to comprehensively consider in order to understand specific situation and to discuss assumption by analyzing and interpreting and reasoning before evaluating and use that conclusion to implement in that specific situation. Facione (2000) identified that critical thinking skill is one of necessary skills in clinical judgment competency including 1) critical thinking skills composed of interpretation, analysis, evaluation, inference, and explanation 2) meta-cognitive self regulation which include competency in monitoring, reflecting, and solving of one's own thought 3) disposition component of critical thinking which include truth seeking, open-mindedness, analyticity, systematicity, critical thinking self-confidence, inquisitiveness, and maturity.

In conclusion, critical thinking is a cognitive process that employs knowledge and skills to reasoning, insight, creatively thinking, and reflecting on the fact which will lead to assumption and conclusion before acting upon the situation. Critical thinking is proactive process to prevent problem which is essential for nursing profession to provide quality of care in various health care facilities. Critical thinking is important in that it is directly relevant to current complex health care environment, for instance, rapid changes in medical technology advancement, synthesizing and integrating related knowledge therefore is necessary for clinical reasoning and clinical judgment which require critical thinking skill.

Enhancement of critical thinking skill in nursing students, therefore, is needed to prepare them as registered nurses who are skillful in critical thinking. Although the quality of nursing institutes have been improved over the period of time, critical thinking of nursing students are jeopardized, evident by the number of students who

passed the standardized professional examination which mostly evaluates critical thinking skill. The study of Wijitr Srisuphan et al. (2008) revealed that only nine institutes (15.25%) that their graduates passed the national professional standardized examination at the first time for 70% and above. Another 16.95% of all institutes had their graduates passed the national professional standardized examination at the first time lower than 30%. Nationwide, only 54.09% of all graduates passed the examination. These findings address the urgent need for nursing institutes to improve critical thinking skill of the students in order to assure the quality of registered nurses and the quality of care of the clients.

From the above reasons, nursing curriculum is required to demonstrate how it develops critical thinking of nursing students. However, it is well recognized that teaching and learning of nursing students cannot be all arranged in classroom because of comprehensive content (Del Bueno, 2006). In addition, clients frequently present with complicated condition and beyond what the students learn in classroom. Therefore, students need to critically comprehend their knowledge and all relevant information to provide care for the clients effectively (Rowles & Brigham, 2005).

The training of thinking skill and process is a major policy in teaching and learning in Thailand. The B.E. 2542 National Educational Act stated that educational institutes are required to provide training program that could help develop thinking process and skill, management skill, situation dealing, and knowledge application to prevent and solve problem. In addition, nursing council of Thailand specified creative thinking and critical thinking as components of continuous self-improvement competency (Thailand Nursing Council, 2001).

Nowadays, educational experts are interested in learning method (Billing & Halstead, 2005) which will be beneficial to promote critical thinking of nursing students.

Mangena and Chabeli (2005) stated that no one could teach critical thinking unless they can think critically. Hence, nursing instructors are required to concern and perceive the importance of critical thinking before they can train nursing students to think critically. Acharaporn Sripusanaphan and Rojane Jintana (2002) conducted survey on perception of nursing instructors on critical thinking of nursing students. The results revealed that 47% of the instructors strongly agreed that critical thinking is an necessary skill needed

for nursing students. 47% of instructors used teaching technique that helped improving critical thinking of the students. Twenty-seven percent of instructors used to evaluate critical thinking of the students.

Although instructors are concerned about the importance of critical thinking on nursing students, the administrators in the institute play the key role in promoting critical thinking systematically and sustainably. The institute administrators have the obligation in academic administration which directly affects the students in terms of quality and quantity (Janthanee Sanguannam, 2008). The administrators well understand the specific environment of the institute hence they can precisely determine strategy that can improve teaching and learning.

The Office of the Higher Education Commission (2009) identified in a curriculum section of the Thailand Qualifications Framework to specify strategy that will guide action plan. Saovanit Chaimusik (2002) stated that strategy is an institutional plan that administrators expect to achieve institutional objectives and derive outcomes that are consistent with missions and goals. The Department of General Education (2002) defined strategy as working methodology that is expected to lead to organizational success which specifies operational goal, policy, and action plan that taken into account environment that might affect indicated plan and bring about outcomes that are coherent with mission and objective of the organization . In summary, strategy is a plan or method of action that derived through thinking process and analyses taken into consideration the internal and external environment that influence strategy. Strategic plan ought to bring about the outcomes that are consistent with missions and most effective regarding the organizational objectives.

In the past 20 years, teaching and learning has been changing from focusing on external factors such as character, enthusiasm, or expression of instructors to internal factors such as knowledge and understanding of learners and reinforcement which in turn can promote meaningful learning. This is rooted from constructivism of Piaget and Vygotsky and has been applied as student-centered teaching and learning method that focused on freedom in knowledge creation, self-interest, happy learning, reflecting, active participation, and enthusiasm as active learners (Chaiwat Suthirat, 2008). This teaching and learning method shifts educators from instruction to construction and so is

believed to promote critical thinking for nursing students.

Previously stated strategies can occur if institutional administrators recognize the importance of academic competency development to improve critical thinking of nursing students. The academic administration that is responsible for instructors and students development and relevant contributing factors allocation is vital for critical thinking promotion. Even though most institutes acknowledge the importance of critical thinking, the lack of precise and comprehensive strategies to promote critical thinking is evident. Previous study conducted on student-centered strategy development but there is limited literature on strategy development to increase critical thinking (Mantarika Witooncha, 2008).

Therefore, critical thinking can be promoted and enhanced through proper strategies. Strategy that requires learners to be active, curious, recognize problem, gather information, diagnose, and derive options through thinking process then decide to act upon and evaluate by oneself can stimulate critical thinking. Similarly, strategy that requires educators to reform thinking, teaching techniques, and ethics can put forward critical thinking among students. Educators need to understand the concept of critical thinking, importance of critical thinking, and teaching and learning process that can improve critical thinking, stimulate learners to be curious and challenged. Roles of educators in the 21<sup>st</sup> century should be reformed to be in the concept of ‘teach less, learn more’. Educators should focus on inspiration enhancement instead of contents in the subjects of curriculum. Instructional design should indicate that teacher is facilitator or coacher and learner learn by doing (Thanakris Mongkolwong, nd.).

The teaching and learning process should focus on participation between educators and learners, various teaching techniques suitable for learners and context, address authentic learning, and diminish student domination. Educators need to stimulate learners to reasoning, seeking and sharing knowledge, including increase learning resources within the institution which is contributing factor for nursing students to permanently support their critical thinking skill development. Classroom atmosphere that permits relax yet enthusiastic to liberally express their thought will embrace self-confidence and self-worth. Moreover, other educational resources and retrieval technology are crucial for critical thinking improvement.

Consequently, the researcher is then interested in studying the strategy development to enhance critical thinking for nursing students which includes instructors and students competency development and contributing factors allocation and administration.

## **1.2 Research Questions**

- 1.2.1 What is the current situation and expectation on critical thinking enhancement for nursing students?
- 1.2.2 What should critical thinking enhancement strategy for nursing students be like?
- 1.2.3 What is the result of implementation on the selected critical thinking enhancement strategy for nursing students?

## **1.3 Purposes of the Study**

- 1.3.1 To explore on the current situation and expectation on critical thinking enhancement for nursing students.
- 1.3.2 To construct and develop the critical thinking enhancement strategy for nursing students.
- 1.3.3 To examine the result of implementation on the selected critical thinking enhancement strategy for nursing students.

## **1.4 Scope of the Study**

Scope of this study is divided into three phases as follows:

**Phase I:** The exploration of the current situation and expectation on critical thinking enhancement for nursing students in public institutes.

### **Scope of Population**

Population of this phase were from state nursing institutes in the northern part under the jurisdiction of the Ministry of Education and Public Health included

- 1. Academic administrators,
- 2. Nursing instructors,
- 3. The third and fourth year nursing students.

### **Scope of Content**

Explore the current situation and expectation on critical thinking enhancement for nursing students regarding administrators' academic behavior, instructors' behavior, teaching and learning methods, and students' behavior.

**Phase II:** The construction and development of the critical thinking enhancement strategy for nursing students in public institutes.

### **Scope of Population**

Population of this phase were

1. Four hundred and seventy seven nursing instructors experienced in teaching students in bachelor degree curriculum and from governmental nursing institutes in the north part under the jurisdiction of the Ministry of Education and Public Health,
2. Experts in academic administration, nursing educational administration, and nursing instructors.

### **Scope of Content**

Construct and develop the critical thinking enhancement strategy for nursing students, including vision, mission, goals, strategic issues, measures, indicators, and measurement and evaluation.

**Phase III:** The examination of the result of implementation of the developed critical thinking enhancement strategy for nursing students.

### **Scope of Population**

Population of this phase were

1. Nursing instructors with 3 years' experience in teaching,
2. Nursing students enrolled in Adult and Elderly Practicum I.

### **Scope of Content**

The strategic issues, strategy, and measures of interest decided by the

opinion of instructors from state nursing institutes which are the fourth strategic issue “promote and support the students development in critical thinking enhancement” and the eighth strategic issue “integration of teaching and learning that promote critical thinking employing scaffolding and mind mapping techniques.” The study of the effectiveness of the critical thinking enhancement strategy was conducted in Adult and Elderly Practicum I. Evaluation was done using instructors and students’ satisfaction, critical thinking score of students at pre and post strategy implementation, and score in using nursing process to analyze given case studies.

### **1.5 Assumption of this research**

The stage of examination of the result of implementation of the developed critical thinking enhancement strategy for nursing students, 16 instructors considered for 1 selected strategy for implementation.

### **1.6 Definitions of Terms**

The definitions of terms used in this study are as follows:

**1.6.1 Strategy Development** is defined as the construction and refinement of strategic plan that is done through the process of analyzing internal and external environment that influence strategy. Strategic plan ought to bring about the outcomes that are consistent with missions and most effective in enhancing critical thinking of the students. The developed strategy encompasses 1) the teaching and learning administration 2) teaching and learning contributing factors allocation and administration 3) instructors competency development in teaching and learning and 4) students promotion and support in critical thinking enhancement.

**1.6.2 Critical Thinking** is defined as the process of reasoning and creative thinking that requires cognition, knowledge, attitude, and skills to reflect and examine the facts to lead to assumptions and conclusion before making decision to act upon the situation of interest. Critical thinking encompasses

- 1) Inference: Ability in differentiation and summary based on provided



information

- 2) Recognition of assumption: Ability in differentiate which argument is strong or weak related to a given situation
- 3) Deduction: Ability in evaluating information and deduce a particular statement from those information. The deduction must entirely base on the statements made and not on conclusions made from one's own knowledge.
- 4) Interpretation: Ability to draw conclusion and explanation the probability of that conclusion from a given information.
- 5) Evaluation of arguments: Ability in evaluating whether information is strongly or weakly relevant to a given situation.

Critical thinking is measured using the Critical Thinking Questionnaire developed by Sriprai Chaiya (1999).

**1.6.3 Critical Thinking Enhancement Strategy Quality** is defined as overall significant characteristics of the strategy that facilitate critical thinking promotion for nursing students. The strategy is required to meet the standard of feasibility, utility, propriety and accuracy.

**1.6.4 Nursing Student** is defined as individual who is currently enrolled in Bachelor of Science in Nursing in state institutes and experienced in nursing practicum.

**1.6.5 Result of Implementation of Strategy Critical Thinking Enhancement** is defined as the outcomes of implementation the selected Strategy to enhance critical thinking for nursing students which are assess by 1) scores of critical thinking skill; 2) scores of analysis over the case study with the application of nursing process; and 3) satisfaction over the strategy

## **1.7 Benefits of the Study**

1.7.1 Teaching and learning aspect: derive body of knowledge in teaching and learning to enhance critical thinking for nursing students.

1.7.2 Educational administration aspect: derive model of strategy formulation to

enhance critical thinking which can later be applied to other group of students.

- 1.7.3 Learner development aspect: derive method to transform learning pattern of the students that will eventually lead to lifelong learners.