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LEARNING OUTCOMES ALIGNED WITH THAI QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN NURSING STUDENTS

Research article

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Abstract

This study aimed to investigate how students view their own learning outcomes in line with Thai Qualifications Framework for Higher Education (TQF: H.Ed.) as well as the relationship between learning outcomes and academic achievement. Participating in the study were 151 BSN students in their year who completed a learning outcomes questionnaire and indicated academic achievement. According to the data, the course successfully high-level learning outcomes. The highest average score was the moral and ethics domain, while the lowest average score was the knowledge domain. There was no statistically insignificant in the relationship between learning outcomes regarding higher education qualification standards based on student's perceptions and academic achievement. The findings can use as a guideline for developing of teaching and learning evaluation. The teaching technique should focus on active learning and encourage students to learn and achieve learning outcomes and academic achievement. The findings can serve as a course syllabus for enhancing the evaluation of education. Active learning should be emphasized to motivate student to learn and improve their academic performance.

Keywords: Academic achievement, higher education, learning outcomes, nursing student

1. Introduction

Education plays an important role in human resource development. The quality assurance system focuses on improving the quality and standard of education at all levels. Therefore, the National Qualification Standard Framework for Higher Education (NQF) has been established to meet the highest education standards and to ensure the quality of graduates at each level of study. An important element within the NQF is that of applied competencies, which is defined as the ability to put into practice, in the relevant context, the learning outcomes acquired in obtaining a qualification (Bezuidenhout, Human, & Lekhuleni, 2013). The NQF can be a standard in educational management to produce an effective teaching and learning process (Office of the Higher Education Commission (OHEC), 2017). The academic qualifications of the student can be determined by their achievement of the learning outcomes. The process of creating effective teaching and learning can encourage students to achieve learning outcomes that represent efficiency in educational management (Castro & Tumibay, 2021).

The Office of Higher Education Commission (OHEC) administers and monitors Thailand's higher education institutions. To provide the learning outcome concept for education management, OHEC created the Thai Qualifications Framework for Higher Education (TQF: HEd). The OHEC expects all graduates to have qualifications such as lifelong learning, be moral and ethical, and become academically qualified social leaders (OHEC, 2017). In addition, the Thailand Nursing and Midwifery Council (TNMC) authorized Thailand's nursing institutions for their graduate qualifications and curriculum (Thailand Nursing and Midwifery Council, 2005). As a result, the nursing curriculum must be developed in compliance with TQF: HEd and the qualification framework for the Bachelor of Nursing Science. Also, the institute's learning outcomes should be related to its philosophy, curriculum objectives, and stakeholder needs, which will help to determine the learning outcomes mapping.

During the 2017 academic year, the nursing faculty at Boromarajonani College of Nursing in Chiang Mai offered a learning management system based on the authorized curriculum B.E. 2560 for the Bachelor of Nursing Science Program. The curriculum's purpose was to focus on social needs in healthcare promotion, personal healthcare, and well-being. This curriculum was implemented for five years, ending in the academic year 2022. According to the TQF: H.Ed. (2009) and this curriculum, the Boromarajonani College of Nursing in Chiang Mai developed new teaching and design methodologies for adult nursing practice subjects for third-year students. These instructional design and teaching methodologies support six learning outcomes.

The six learning outcomes are as follows: 1) Moral and ethical considerations in adult nursing care; develop moral and ethical considerations in the nursing profession 2) Adult nursing knowledge: the ability to comprehend and apply nursing theories and concepts 3) Cognitive abilities: apply nursing concepts and principles to provide appropriate adult care while also advancing nursing innovation. 4) Interpersonal skills: the capacity to communicate knowledge, skills, attitudes, and beliefs to colleagues and patients while practicing compassion. 5) Analytical and communication skills: the capacity to apply mathematics and statistics; fluency in Thai and English; effective and responsible use of information technology; and the ability to share knowledge and collaborate with a team. and 6) Professional practical skills: using the nursing process, science, and art in adult nursing; performing caring, health promotion, protection, and rehabilitation of adults with chronic and critical illnesses; caring with holistic nursing, professional ethics, and legal considerations; and caring while considering individual people and diversity (Office of the Higher Education Commission, Thailand, 2014).

Adult nursing practice subjects consist of health assessment, promotion and prevention of disease, and rehabilitation. This course provides care for people with acute, critical, chronic, and end-stage conditions. Students must learn how to use a nursing process based on holistic care, humanized care, caring, and evidence-based practice to recognize patients' rights, patients' safety, local wisdom, health innovation, and empowering family care competency in accordance with laws and professional ethics.

Praboromarajchanok Institute currently identifies the concept of humanized nursing care as a fundamental skill for nursing students. The humanized nursing concept was developed by incorporating the concepts of health, social, and human sciences into teaching and learning



across adult nursing practice subjects. Through a range of authentic learning approaches, the teaching and learning process based on this notion has established a student's perspective to be humanized (Chanchang, 2020; Praboromarajchanok Institute, 2017). These subjects practice in real-life scenarios by observing the patient's behavior and cognition. Nursing teachers and/or practical instructors must give learning activities based on real-world scenarios to help students enhance their skills in patient care while applying academic and professional information.

Furthermore, the institute's qualification development policy required teaching and learning based on humanized nursing principles to adhere to the National Higher Education Qualification Standard Framework and Educational Standards of the Nursing Council (Boromrajonani College of Nursing, Chiang Mai, 2017). As a result, the primary goal of adult nursing practice subjects was to care for all intensive patients. Nursing care for acute and critical patient difficulties included oxygen and breathing problems, cardiovascular problems, hematological problems, and brain and spinal cord disorders, all of which were nursing procedures based on holistic care. The adult nursing practice divided students into groups of 7-8 students, practicing in a hospital. This approach motivates students to achieve learning outcomes that align with the National Framework for Higher Education Qualifications.

Bedside care, basic and advanced nursing skills, nursing conferences, nursing care plans, nursing case studies, clinical instruction, and journal clubs are all examples of adult nursing practice subjects. These nursing approaches indicate humanized nursing notions that help to develop advanced cognitive abilities. Furthermore, these practices shaped a student's viewpoint as humanized and analytical (Chanchang, 2020). The teachers' crucial responsibility was to create a teaching technique that could assist learners' creative thinking and critical problem-solving (Gonzalez, 2012). As a result, the integrated teaching and learning method should be applied to learning activities such as case studies, nursing conferences, and nursing diagnostics. Nursing care standards may benefit from this integration of nursing practice (Ahmed, Alostaz, & Allateef Sammouri, 2016; Alotaibi, 2016).

Students can improve their learning ability if they have confidence in their abilities. When problems or hard tasks come up, students realize how hard they are working to learn and study. Self-efficacy is one of the factors that contribute to success. Individuals with a high perception of their abilities see difficult tasks as challenging rather than risky or inevitable. They are enthusiastic about their work, have a high desire for success, and use perseverance and optimism to work longer than individuals who perceive themselves as having the low ability (Bandura, 1997). This is consistent with the idea of Evans (1988), who explained that beliefs about one's ability are based on feelings, thoughts, motivation, and behavior. Individuals with high self-efficacy can help themselves succeed when faced with difficult problems. They will try to solve problems by using effort and will view mistakes as an effort that is not sufficient or lacking in knowledge or skills.

The academic qualifications can determine with the achieve success in learning. The different of level of academic achievement based on individuals' perceived ability to learn. This shows that one's perception of their ability affects their ability to learn. Teaching methods that integrate theoretical learning and practical application enhance students' learning ability and their ability to apply knowledge. The academic qualifications related with TQF: H.Ed. and the qualification framework for the Bachelor of Nursing Science. However, the lack of standard assessment tools for academic qualifications is the critical problem particularly in adult nursing

practice subjects. There should be improvements in assessment tools to meet the standards of academic qualifications, to help in the development of students into competent graduates. This study aimed to investigate students' perceptions of learning outcomes regarding the TQF in adult nursing practice courses, and determine the relationship between learning outcomes and academic achievement.

2. Methods

A cross-sectional descriptive survey design was used in this study.

2.1. Participants

Participants in the study can be used a convenience sample of 151 participants (effect size = 0.3, $\alpha = 0.05$, and power = 0.8) in a Bachelor of Science Nursing voluntarily enrolled in the study. Participants met the following criteria: (a) third-year nursing students who enrolled in adult nursing practice course II in semester 2 of the academic year 2021 (b) attended a clinical practiced in adult nursing practice course II.

2.2. Data Collection

Participations who met research criteria and will be asked to participate in the study and reviewed the recruitment statement after completing a clinical practiced in adult nursing practice course II. Then, they were asked to completed the learning outcomes self-assessment checklist.

To assess the participants' perceptions of learning outcomes, the researcher developed the learning outcomes self-assessment checklist based on TQF. There were six domains of learning outcomes checklist including; 1) moral and ethics; 2) knowledge; 3) intellectual skills; 4) interpersonal and responsibility skills; 5) numerical analysis, communication, and information technology skills; and 6) professional practice skills. The self-assessment checklist was a five-point Likert's scale of agreement level with learning outcomes. Options of strongly agree, agree, moderate agree, less agree, the least agree received scores of 5, 4, 3, 2, and 1, respectively, and score of agreement was calculated. The interpretation of the results is based on the average score as follows: 4.50-5.00 indicates highest level, 3.50-4.49 indicates high level. 2.50-3.49 indicates moderate level, 1.50-2.49 indicates low level, 1.00-1.49 indicates lowest level. The checklist was confirmed in terms of content and face validity by three professors including two faculty members of adults' health nursing, and one professor in educational measurement and evaluation with an IOC of 0.66-1 and updated it. Moreover, Cronbach's alpha was used for examining reliability of the checklist. A reliability coefficient of 0.94 indicated the reliability of the research tool.

Academic achievement was determined by the instructors' evaluation scores. The criteria for determining the result after completed adult nursing course II practicing must be at least a sixty percent score out of a possible one hundred. The criteria for the adult nursing practice course II are broken down into five different levels: 60.00 - 64.99 points indicate a moderate score, 65.0 - 69.99 points indicate a relatively good score, 70.00 - 74.99 points indicate a good score, and 75.00 - 79.99 points indicate an excellent score. A score between 80.00 and 100.00 indicates an outstanding performance.



2.3. Data Analysis

In the study, mean and standard deviation were used to describe students' perceptions of learning outcomes regarding the TQF in adult nursing practice courses II. Pearson's correlation was employed in order to investigate the association between learning outcomes and academic achievement.

2.4. Ethical Consent of the Research

This study was approved by the Ethics Committee of Boromarajonani college of nursing, Chiang mai (Document No. BCNCT01/2565). All participants were given verbal and recruitment statement that participation did not affect students' course outcomes. They signed consent after accepted participate in the research. They were assured that their confidentiality would be maintained, and they were free to withdraw from the study at any time. The researcher adhered to the principle of voluntary rights protection, and kept the information confidential and presented the results of the research as a whole only.

3. Result

The study found that nursing students have their learning outcomes according to Thailand Qualification Framework is at high level (Table 1). The learning outcomes can be listed in different mean scores, but all of components indicated are at high level.

Table 1 *learning outcomes according to TQF based on student perception (N = 151)*

Learning outcomes	\bar{x}	SD	Level
Moral and Ethics	4.44	0.76	high
Knowledge	3.80	0.72	high
Cognitive skills	4.04	0.75	high
Interpersonal skills and responsibility	4.28	0.80	high
Analytical and communication skills	3.90	0.76	high
Professional practice skills	4.20	0.80	high
Overall	4.11	0.78	high

After completed practicing adult nursing course II, students reported achieving very high level of learning outcomes ($\bar{x}=4.11$, $SD=0.78$). It can be observed that the learning outcomes based on the TQF as perceived by nursing students after completing their adult nursing practicum were highest for Ethics and Professionalism ($\bar{x}=4.44$, $SD=0.76$), followed by Interpersonal and responsibility skills ($\bar{x}=4.28$, $SD=0.80$), professional practice skills ($\bar{x}=4.20$, $SD=0.80$), and Intellectual skills ($\bar{x}=4.04$, $SD=0.75$). The lowest mean score was observed for knowledge ($\bar{x}=3.80$, $SD=0.72$).

The finding for correlation showed that no statistically significant relationship between student perceptions of learning outcomes and academic achievement. Interestingly, it was discovered that students' perceptions of their knowledge were negatively correlated with their academic performance, as shown in Table 2.

Table 2 *Correlation of learning outcomes and academic achievement*

learning outcomes	academic achievement	
	<i>r</i>	<i>p-value</i>
Moral and Ethics	.049	.550
Knowledge	-.012	.884
Cognitive skills	.084	.304
Interpersonal skills and responsibility	.049	.548
Analytical and communication skills	.033	.690
Professional practice skills	.024	.772
Overall	.041	.618

The correlation between each component of learning outcomes showed it has no relation with academic achievement. The correlation can be discussed in the negative knowledge and their leaning outcomes.

4. Discussion

In this study, when the practicing course was completed, nursing students have perception of the learning outcomes were high level in all of domains of TQF, including moral and ethics, cognitive skills, interpersonal skills and responsibility, analytical and communication skills, and professional practice skills. When students are engaged in stimulating activities, such as nursing practice, they are able to think critically and freely investigate new ideas; they are also more likely to devote significant time and effort to working harder. This helps explain why the nursing students' learning outcomes were so impressive (Wongchantra & Nuangchalerm, 2011; Luo, 2022).

The identity of nursing program in the Boromarajonani College of Nursing, Chiang Mai, that is humanistic nursing care. Nursing curriculum focus on education management and learner empathy, sympathy, authenticity, accountability, and respect for diversity. Furthermore, the finding of Mulyanto et al. (2018) showed that student learning outcomes that have high critical thinking skills is higher than students who have low critical thinking skills. In other words, learning model and critical thinking skills have influence partial on learning outcomes. Similarly, practicing adult nursing course II simultaneously provided various teaching strategies and critical thinking skills that significant effect on students learning outcomes.

On the other hand, the domain with the lowest average value is knowledge, which can be affected by learner variations, environmental factors that influence learning, as well as measurement and evaluation procedures, has an average value that is the lowest of all the domains. These factors can have an effect on how students understand the content that is being taught. The practical exercises that students participate in as a part of their training are divided into subgroups that concentrate on different patient populations. These exercises are guided by a variety of different instructors, which may have an impact on the knowledge domain learning outcomes. As a result, the outcomes in the knowledge domain are the lowest on average by students' perception.

The correlation between student perceptions in all domains of learning outcomes and academic achievement was not statistically significant. This result is corresponded with a study



by El-Maaddawy & Deneen (2017). Learners are better able to be willing to learn and suitably enhance their learning when they are able to systematically analyze their own learning results thanks to the recognition of learning outcomes in line with learning standards (Harris & Clayton, 2019). Additionally, students could estimate high level in their learning outcomes because they could assess and enhance their learning in the areas they require. Academic achievement is a gauge of a student's progress across all subjects by teachers' evaluation, thus it should inspire them to learn more and become better learners.

Positive academic accomplishment will mostly arise from acknowledging good learning results. The perception of significant learning outcomes is linked to students' comprehensive learning, which includes knowledge and abilities in a variety of domains. The relationship between the learning outcomes and academic achievement can be influenced by a variety of variables, including prior educational experiences, difference practicing areas, or patients. In order to properly comprehend and assess the relationship between the design and promotion of successful learning and teaching, a wide variety of measurements, including learning outcomes and academic accomplishment are required.

Based on study, high levels of learning outcomes indicate a higher level of knowledge and understanding. With the knowledge and skills learned, individuals are better able to understand and solve complex problems, as well as develop innovative and creative ideas. Furthermore, high levels of learning outcomes can enhance self-confidence and have the potential to change one's life for the better. The results of this research can be utilized to develop teaching management practices. Course instructors should plan and design new teaching strategies that prioritize the learner and focus on active learning to enhance nursing competencies (Horntvedt et al., 2018; Fan et al., 2020). Activities to supplement the curriculum should also be planned to enhance knowledge and professional skills in order to promote learning in accordance with the National Qualifications Framework and to guide the development of students into quality healthcare professionals who can meet the needs of patients and society in the 21st century (Bedir, 2019).

In general, acquiring clinical skills is a complex process; therefore, when students are being prepared for training in clinical skills, it is essential to take it into account the various learning styles and priorities of the students. According to Horntvedt et al. (2018), continuous presentation of educational materials has the potential to boost students' motivation, happiness, and enjoyment, as well as complete other approaches. This is because e-learning gets learners involved in the learning process and encourages learning and self-guidance. Based on the results of above-mentioned studies in addition to the results of the present study, applying e-learning with traditional training is recommended for training nursing clinical skills. They have to learn by integrating technology education for appropriate learning environments (Nuangchalerm, 2020). It is among the responsibilities of nursing trainers not to restrict training to modern classroom.

5. Conclusion

The highest average score was the moral and ethics domain, while the lowest average score was the knowledge domain. There was no statistically insignificant in the relationship between learning outcomes regarding higher education qualification standards based on student's perceptions and academic achievement. Further studies should investigate the effects

of different teaching approaches on learning outcomes for the Bachelor of Science in Nursing program, in line with the National Qualifications Framework at the tertiary education level. The study should also examine the outcomes of using different teaching approaches on learning outcomes in other sample groups such as employers/graduates and course coordinators. The instructional practices should focus on active learning and encourage students to learn and achieve learning outcomes and their academic performance.

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