

Expected and Actual Learning Outcomes of Teacher Students Based on National Qualifications Framework for Higher Education

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Received: August 11, 2021 Accepted: September 19, 2021 Online Published: October 11, 2021

doi:10.5539/jel.v10n6p18 URL: <https://doi.org/10.5539/jel.v10n6p18>

Abstract

The major objectives of the research were to evaluate and compare expected and actual learning outcomes of teacher students based on National Qualifications Framework for Higher Education in Thailand. The key informants were one hundred and eighteen 1st and 2nd year of teacher students from one university in 2020. The research instrument was a questionnaire on five domains of the national qualifications framework for higher education in Thailand. The data were analyzed by a statistical procedure: percentage, mean, and standard deviation. Paired-samples t-test and content analysis were employed for the study. The research findings indicated that the overall expected learning outcomes and actual learning outcomes regarding the five domains of the national qualifications frameworks were at a high level. The expected learning outcomes and actual learning outcomes regarding the comparison of the expected learning outcomes and actual learning outcomes with the national qualifications framework were not different.

Keywords: expected learning outcomes, actual learning outcomes, qualifications frameworks, higher education

1. Introduction

Education is the best way for human resource development as well as country development. The National Education Act B.E. 2542 (1999) and Amendments, the Second National Education Act B.E. 2545 (2002), focus on creating good, intelligent and happy Thai citizenships based on learner centered instruction (Khampirat et al., 2020). According to the previous educational reform of Thailand, the educational has been reformed in pre-school education, basic education and higher education throughout Thailand. Consequently, Office of Higher Education Commission in Thailand has established the official regulations for higher education since 2005. The university curriculum has to be developed every five years for the desired characteristics of students based on National Qualifications Framework for Higher Education (Pitiyanuwat et al., 2017). Learning Outcomes (LO) are an important indicator for the quality of students consisting of ethics and morals, knowledge, cognitive skills, interpersonal relation and responsibilities, including analytical skills in number, communication and information technology application (Siribanpitak, 2018).

University has offered quality of education to provide students with knowledge and abilities of sciences and science instructional management, including scientific research. Additionally, learning expectation focuses on building ethics and morals in teaching profession, responsibilities for society and participation in country development (Prachagool et al., 2016). The program is currently offered in university based on national qualifications framework for higher education in Thailand. The major aim of the curriculum is to upgrade the student quality equivalent to other national and international higher education institutes. The desired qualifications of university students include ethics and morals, knowledge, cognitive skills, intelligence, interpersonal relation and responsibilities, including analytical skills in number, communication and information technology application (Akarawang et al., 2015; Papattha et al., 2015). It is necessary to use various teaching methods to produce graduates based on Thai Qualifications Framework for Higher Education. The qualifications of students are also a major factor for education quality assurance of the program of study. The major goal of the program is to produce efficient graduates with leadership and abilities in applying their knowledge for social services and driving policy on education reform to practice (Nuangchalerm, 2020).

Most students who apply for learning expectation with high expectations of learning outcomes. Expected learning outcomes based on individual abilities and purposes are now currently interested. Therefore, the

expected learning outcomes are an important indicator for the achievement of the university in producing graduates based on national qualifications framework for higher education in Thailand (Maneerat et al., 2015). Therefore, the main interested in conducting research on expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand. The research findings have provided useful information for improving instructional management into program of study.

2. Methods

2.1 Key Informants

The key informants were one hundred and eighteen 1st and 2nd year undergraduate teacher students in general science program from one university in 2020. The research instrument was a questionnaire on five domains of the national qualifications framework for higher education in Thailand.

Five domains of National Qualifications Framework for Higher Education in Thailand consisted of 1) ethics and morals, 2) knowledge, 3) cognitive skills, 4) interpersonal relation and responsibilities, and 5) analytical skills in number, communication and information technology application.

2.2 Research Instrument

A rating scale questionnaire of Likert's scale with one open-ended question on the factors in expected learning outcomes and actual learning outcomes consisted of five domains of the desired characteristics of the students: 1) ethics and morals, 2) knowledge, 3) cognitive skills, 4) interpersonal relation and responsibilities, and 5) analytical skills in number, communication and information technology application.

2.3 Construction and Development of Research Instrument

The Research Instrument Was Constructed and Developed as Follows

- 1) Study on documents and research relating to construction of a questionnaire on the factors concerned with expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand.
- 2) Design scope of contents and structure of questionnaire on the factors concerned with expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand relating to the definition of keywords.
- 3) Design scope and items of questionnaire on the factors concerned with expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand relating to the definition of keywords.
- 4) Construct a questionnaire on expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand and present to five experts for assessment of content validity and appropriateness.
- 5) Analyze the index of item objective congruence of the questionnaire after the assessment of the experts.
- 6) Try out a questionnaire on thirty undergraduate students of General Science Program who were not the target population. They were selected by cluster random sampling. The data were analyzed and calculated for discrimination index of the questionnaire. The discrimination index of the questionnaire on ethnics and morals was .36 to .67. The discrimination index of the questionnaire on knowledge was .51 to .77. The discrimination index of the questionnaire on cognitive skills was .28 to .69. The discrimination index of the questionnaire on interpersonal relation was .39 to .65. The discrimination index of the questionnaire on analytical skills in number, communication and information technology application was .32 to .68.
- 7) Analyze the reliability of the questionnaire on expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand by Cronbach's reliability coefficient alpha. The reliability index of the questionnaire on ethnics and morals was .71. The reliability index of the questionnaire on knowledge was .67. The reliability index of the questionnaire on cognitive skills was .70. The reliability index of the questionnaire on interpersonal relation was .71. The reliability index of the questionnaire on analytical skills in number, communication and information technology application was .69.
- 8) Edit and print the final questionnaire on expected learning outcomes and actual learning outcomes based on National Qualifications Framework for Higher Education in Thailand for data collection.

2.4 Data Collection and Analysis

The data were collected by a rating scale questionnaire from one hundred and eighteen 1st and 2nd year of teacher

students in 2020. The accuracy and completeness of the data was examined by the author before data analysis as follows.

Five-point rating scale of Likert was employed for analyzing the quantitative data by the following scores of Likert's scale. It ranges 5–1 points mean the highest to lowest levels of expected learning outcomes and actual learning outcomes. Criteria for score interpretation

4.21–5.00 = very high

3.41–4.20 = high

2.61–3.40 = fair

1.81–2.60 = low

1.00–1.80 = very low

Content analysis was used for qualitative data and the research results were presented by a tabulated form with frequency and percentage.

The expected learning outcomes and actual learning outcomes of the students were analyzed by a statistical procedure: mean and standard deviation.

Paired samples t-test was employed for a comparative analysis of the differences in five major domains of the expected learning outcomes and actual learning outcomes of the students of General Science Program based on National Qualifications Framework for Higher Education in Thailand.

3. Results

The research findings showed that the average expected learning outcome was at a high level. The five high rated domains of the expected learning outcomes were 1) knowledge 2) cognitive skills, 3) interpersonal relation and responsibilities, 4) ethics and morals, and 5) analytical skills in number, communication and information technology application respectively. The average actual learning outcome of the students of General Science Program was at a high level (Table 1). The five high rated domains of the expected learning outcomes were 1) knowledge 2) cognitive skills, 3) ethics and morals, 4) interpersonal relation and responsibilities, and 5) analytical skills in number, communication and information technology application respectively (Table 2).

Table 1. The mean score of expected learning outcomes of the students for five domains

Five domains of expected learning outcomes	\bar{x}	S.D.	Level of Expectation
Knowledge	4.07	0.47	high
Cognitive skills	4.05	0.43	high
Interpersonal relation and responsibilities	4.02	0.41	high
Ethics and morals	4.00	0.52	high
Skills in number, communication and Information technology application	3.92	0.54	high
Total	4.01	0.47	high

Table 2. The mean score of actual learning outcomes of the students for five domains

Five domains of actual learning outcomes	\bar{x}	S.D.	Level of Expectation
Knowledge	4.26	0.53	high
Cognitive skills	4.19	0.39	high
Interpersonal relation and responsibilities	4.16	0.50	high
Ethics and morals	4.11	0.52	high
Skills in number, communication and Information technology application	3.07	0.53	high
Total	4.16	0.49	high

The findings indicated that the differences in expected learning outcomes and actual learning outcomes of the students for five domains based on National Qualifications Framework for Higher Education in Thailand were not different at the .05 level of the statistical significance (Table 3).

Table 3. The average expected learning outcome and actual learning outcome of the students

Expected learning outcomes and actual learning outcomes	\bar{X}	S.D.	df	t	P
Expected learning outcomes	110.21	9.60	117	.767	.440
Actual learning outcomes	114.07	10.10			

The most frequent suggestions of the research study showed that teaching materials, instructional equipment and resources should be supported and sufficient for students. The General Science curriculum should be developed for appropriate and practical application of the knowledge and skills in teaching profession.

4. Discussion

The average expected learning outcome the students regarding the five domains was at a high level. The five high rated domains of the expected learning outcome were 1) knowledge 2) cognitive skills, 3) interpersonal relation and responsibilities, 4) ethics and morals, and 5) analytical skills in number, communication and information technology application respectively. The average actual learning outcome of the program in teacher students was at a high level. The five high rated domains of the expected learning outcomes were 1) knowledge 2) cognitive skills, 3) ethics and morals, 4) interpersonal relation and responsibilities, and 5) analytical skills in number, communication and information technology application respectively. The results may be caused by the major objective in each program of study. The objective is to produce graduates with knowledge and abilities in content and pedagogical management focusing on professional ethnics and morals, responsibilities for society, leadership and participation in country development (Thitivesa, 2014; Vibulphol, 2015).

Additionally, the program has offering based on the desired characteristics of education curriculum and National Qualifications Framework for Higher Education in 2019. The desired characteristics of graduates consist of intelligence, having analytical thinking skills, long life learning, and self-study, including teamwork skill, information technology application, lesson design and lesson plans, knowledge transfer, and teaching methodology (Nuangchalerm, 2012; Nuankaew & Nuankaew, 2019; Nuangchalerm, 2020). The findings indicated that the differences in expected learning outcomes and actual learning outcomes of the students for five domains based on National Qualifications Framework for Higher Education in Thailand were not different at the .05 level of the statistical significance. It may cause the program of study make an integration between curriculum, instruction, and assessment as well (Pornphol & Tongkeo, 2018; Tamronglak, 2020).

The results may be caused by the educational management of teacher preparation program based on National Qualifications Framework for Higher Education in Thailand and the National Education Act B.E. 2542 (1999). Suggestions for practical application should conduct extra curriculum of technology application should be organized for the students. As a result, the students are able to access to the online resources for self-study. The research study provides useful information and suggestions for curriculum development based on the social changes and country development in the future (Wisetsat & Nuangchalerm, 2019). The research should provide useful information and suggestions for improving learning outcomes relating to current curriculum and instruction (Nuchwana, 2012; Akarawang et al., 2015; Charupash, 2019). The learning outcomes will be met the requirement national goal to achieve quality of education as well as sustainable goal of global education.

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