



## Learning Outcome by TQF indicators by using Integrated knowledge Instructional Model Course Research Methods in Accounting for 4<sup>th</sup> Year accounting students, Rajabhat Mahasarakham University

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**Abstract:** *The specific purpose is to study the learning outcome by TQF indicators by using Integrated knowledge instructional model course research methods in the accounting of 4<sup>th</sup> academic year accounting students, at Rajabhat Mahasarakham University. The participant in accounting students of 29 persons, and they all were by purposive sampling. The collections came from the learning outcome test and knowledge test. Learning outcome by TQF indicators by using Integrated knowledge instructional model course research methods in accounting of Interpersonal skills and responsibility, numerical analysis, communication, and Information technology skills, knowledge, ethics and moral, cognitive skills at the level of high levels. According to analyses of revealed that knowledge teaching techniques by using integrated knowledge instructional model course research methods in accounting in scores of 77.71% with level A average scores of 80-100, 48.28%, level B+ average score of 75-19, 20.69%, level B average score of 70-74, 20.69%, respectively.*

**Keywords:** Learning Outcome; Thailand Qualifications Framework for Higher Education Indicators

### Introduction

Teaching and learning in the 21st century found that the factors supporting learning, the teaching and learning process in developing student achievement in the 21st century is the process of referring graduates to have desirable characteristics of educational management (St George's College.2016). Therefore, it is an important mechanism wherein higher education institutions are responsible for producing graduates must develop graduate quality according to the needs of graduate users, develop knowledge and abilities according to the framework of 5 qualifications standards, to be of standardized quality by learning outcomes that learners should have at least 5 aspects to be able to develop graduates with desirable characteristics (Office of the Higher Education Commission. 2015) which consists of Ethics and Moral, Knowledge, Cognitive Skills, Interpersonal Skills and Responsibility, and Numerical Analysis, Communication and Information Technology Skills, which for supporting the current era, there has been a change in both communication and information technology.

Therefore, the key supporting factors for learning in the 21st century are the evaluation of teaching and learning programs, career development, and the learning environment must be consistent with the productivity support system that produces 21st-century outcomes for today's learners, By focusing on 21st-century skills that provide learners with content knowledge and expertise, namely: building understanding between core subjects as well as an interdisciplinary 21st-century model that emphasizes deep understanding rather than superficial knowledge. Engage students with real-world information and tools and they will meet experts in college, or at work, and student life is best learned when working actively, meaningful problem solving, Multiple measures of learning are available (St George's College.2016). The teaching and learning process by using various techniques of the instructors is very important and necessary for the learning outcomes in the course content to promote the learners to achieve learning outcomes following the qualification's standard framework. Higher education level. To make the process of teaching and learning for learners to gain knowledge and understanding of the course content according to the course description and course objectives specified in the curriculum. Therefore, the process of teaching and learning



integrated knowledge into appropriate teaching and learning management techniques to enable learners to acquire skills in all 5 areas suitable for the course content, able to encourage students to gain knowledge and understanding of the research process and to be able to apply the knowledge gained from the course to the transfer of knowledge and integration of knowledge to the community in organizational management knowledge. Develop knowledge to lead to the transfer of development of their abilities to occur to drive the community to knowledge by learning together as a team (Team Learn). The organization focuses on everyone's participation, which is integrated teaching of knowledge by teaching that emphasizes a variety of methods, Self-learning, collaborative learning, learning from nature, teaching based on actual conditions, and linking content with a student-centered focus (Thirathanachaikul, K. 2014: 134). Therefore, to gain knowledge and understanding in the research preparation process, research principles and methods of researching various forms, and the communication of knowledge about research, study, and review of relevant literature will lead to the integration of knowledge gained from the lessons.

Based on the above information, the researcher studied academic achievement according to the Higher Education Qualifications Framework by using Integrated teaching techniques in the course of Accounting Research Methods for 4th Year Accounting Undergraduate Students, Faculty of Management Science, University. Maha Sarakham Rajabhat. The results obtained from the research will yield results from the integration of knowledge, which will be a guideline for teaching and learning that promotes the characteristics of learners according to the framework of qualifications standards and used as information for the development of teaching and learning management to develop desirable graduate characteristics to meet human resource needs in the Thailand 4.0 era.

## Research objectives

The objectives of this research were to study the academic achievement according to the framework of tertiary qualifications of accounting students and to study the level of knowledge and understanding of accounting students.

## Literature Review

### 1. Integrated learning management

Integrated learning management refers to the process of organizing learning experiences based on interests, abilities by linking the subject matter of various sciences to each other, allowing learners to change behaviors, to apply knowledge, skills, and attitudes to create jobs. Solve problems and use them in daily life by yourself. The integrated teaching and learning management process by learning the interests and abilities of learners using a variety of formats and methods, emphasizing teaching based on actual conditions, real practice, learning from nature, and linking course content and blended courses to enable learners to develop integrated learning skills, and to be able to use them in daily life (Kongwimon, W. 2017). The main characteristics of integrated teaching include (Phanrod, P. 2012): (1) the integration between knowledge, process, and practice, (2) harmonious integration between subjects, (3) the integration between what is learned and real-life, (4) Integration to manage redundancy of various content, and (5) integrating the relationship between concepts of various subjects to produce meaningful learning.

## 2. The concept of teaching integrated knowledge

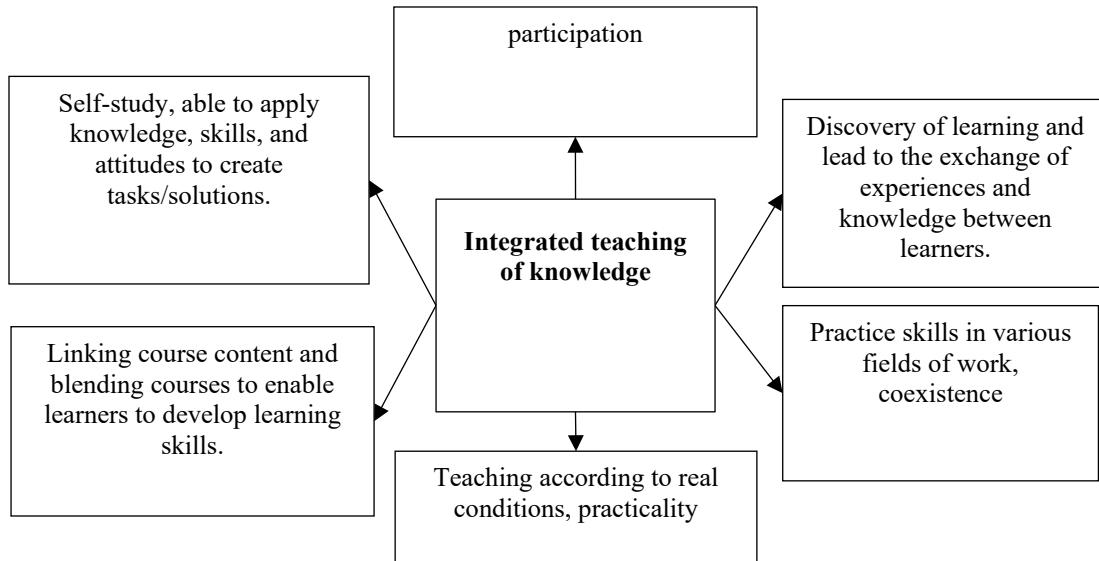


Figure 2 Integrated knowledge

The researcher formulated the teaching guidelines by applying the teaching management model in the Accounting Research Methodology course by using a variety of formats and methods, emphasizing the teaching according to the actual conditions, the actual practice, learning from nature, and the linkage of course content and the blended curriculum for learners to develop integrated learning skills to enable learners to learn from practical methods to learn how to solve problems leading to the ability to analyze, seek information and solutions to problems, learn to work together, exchange information with each other, and support each other in learning and allow learners to learn according to the framework of qualifications in all five areas of higher education. Integrated teaching and learning management are beneficial to learners in the following areas (Phanrod, P.2012): (1) It is bringing together different subjects or sciences under the same topic. (2) It helps the learners to learn deeply and closely resemble real life. (3) Help learners holistically gain knowledge and understanding. (4) Helping learners to seek knowledge and understanding from the things that are around them. (5) It is a guideline that allows teachers to work together or coordinate together happily. And (6) Encourage and encourage teachers to come up with new methods or techniques.

## 3. The concept of the qualification standard framework.

According to the Higher Education Qualifications Standards Framework, it is a guideline for creating a consistent understanding of the National Higher Education Qualification Standards Framework, to be a tool for formulating policies for developing educational quality and educational standards set forth under the National Education Act 1999 to be concrete by applying it as a guideline for developing curriculum management to achieve standardized quality. Because in today's era there has been a change in both communication and information technology. Therefore, some people are interested in developing both their knowledge and work potential. The process of teaching and learning must therefore be developed to accommodate the changes of globalization, by having a learning process and learning outcome standards according to the Higher Education Qualifications Framework of Thailand to change the behaviors that students develop on their own from the experiences that received during the



study. Learning outcomes that learners should have at least 5 aspects to be able to develop graduates with desirable characteristics (Office of the Higher Education Commission.2015) are as follows:

3.1. Ethics and Moral means to act with integrity, ethics, and with personal and collective responsibility, The ability to adjust the way of life in conflicts with values, develop habits and behave in a personal and social manner. The details are as follows: (1) Realizing the values and virtues, ethics, sacrifice, and honesty. (2) Discipline, punctuality, and responsibility to self and society. (3) Respect the rights and listen to the opinions of others as well as respect the values and dignity of human beings. (4) Respect the rules and regulations of the organization and society. (5) have academic and professional ethics

3.2 Knowledge refers to the ability to understand, think and present information, analyze, and classify facts in theory, processes, and be self-sufficient. The details are as follows: (1) Knowledge and understanding of important principles and theories in the course content. (2) Able to analyze problems, understand and apply knowledge, skills, and use appropriate tools and equipment to solve problems. (3) Able to analyze and design the operation to meet the requirements. (4) Able to monitor progress in environmental science as well as its application to professional careers. (5) Knowing, understanding, and interested in continually developing relevant knowledge and expertise

3.3. Cognitive Skills refer to the ability to analyze situations and use their knowledge of concepts, theories, and processes to analyze and solve problems when faced with new, unexpected situations. as the following details: (1) Think critically and systematically. (2) Able to search and interpret books and information for creative problem-solving. (3) Able to collect, study, analyze and summarize issues and needs. (4) Able to apply knowledge and skills to problem-solving appropriately.

3.4. Interpersonal Skills and Responsibility Refers to the ability to work in groups, demonstrate leadership, self, and social responsibility, the ability to plan and take responsibility for one's learning. as the following details: (1) Able to communicate in both Thai and foreign languages effectively with diverse groups of people. (2) Able to assist and facilitate the resolution of situations in either the leadership role or the team member role. (3) Can use knowledge of science to guide society inappropriate issues. (4) Be able to take the initiative to address issues both personally and collectively, and to take appropriate standpoints for both one's own and groups. (5) Responsible for continuous personal and professional learning development.

3.5. Numerical Analysis, Communication and Information Technology Skills refer to numerical analysis ability, the ability to use mathematical and statistical techniques, the ability to communicate in both speaking, writing, and using information technology, as follows; (1) Skilled in using basic computer programs such as Microsoft office. (2) Able to introduce problem-solving issues using mathematical information or constructively applied statistical representations to related problems. (3) Able to communicate effectively both orally and in writing, choosing the appropriate format of the presentation medium. And (4) can use a computer as a medium for presenting information by using appropriate programs.

#### **4. Concepts of knowledge and understanding in the course**

From the objectives of the Accounting Research Methodology course, the objective is to provide learners with knowledge of research principles and methods, conduct research in various forms, and communicate research knowledge, review relevant literature in the field of accounting to provide students with an accurate understanding of the different types of research knowledge, able to produce research results effectively in a complete step-by-step process, seek



knowledge and participate in field research activities, practice in presenting research projects, reporting research, and applying the learned content to practice in various business organizations, and can correctly summarize the concepts to transfer knowledge to the community in the research process (Accounting, Faculty of Management Science, Mahasarakham Rajabhat University. 2011:98).

### Research conceptual framework

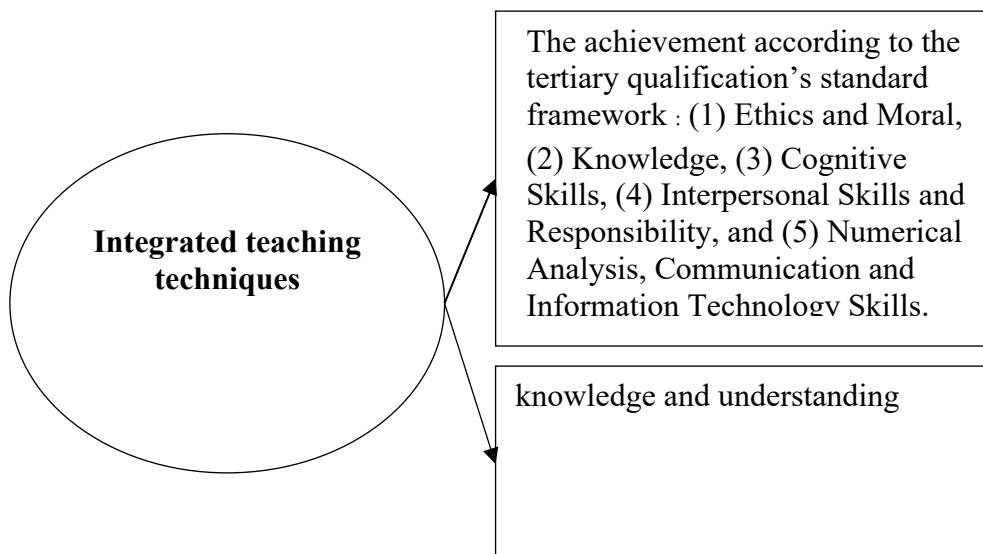
The researcher reviewed the relevant literature and formulated the conceptual framework as follows:

The independent variable is Integrated teaching techniques (Kongwimon, W. 2017).

The dependent variables are:

1. The achievement according to the tertiary qualification's standard framework (Office of the Higher Education Commission, 2015) consists of (1) Ethics and Moral, (2) Knowledge, (3) Cognitive Skills, (4) Interpersonal Skills and Responsibility, and (5) Numerical Analysis, Communication, and Information Technology Skills,

2. knowledge and understanding (Arsasri, K. 2016)



**Figure 3** Research Conceptual Framework



## Methodology

The theme of this research is quantitative research. Data were collected by using a questionnaire that aims to study academic achievement following the Higher Education Qualifications Framework using Integrated teaching techniques. while accounting research methodology to increase academic achievement and knowledge of 4<sup>th</sup>-year students, Faculty of Management Science Maha Sarakham Rajabhat University. The researcher has determined the sample population is 29 students studying in the group 3 accounting research methodology course for the second semester of the academic year 2016.

## Results and discussion

General information of students studying in Bachelor of Accounting program and studying accounting research methodology course in semester 2/2016 at 4th-year level, Maha Sarakham Rajabhat University.

1. The results of the analysis of data on personal factors of Maha Sarakham Rajabhat University personnel classified by gender are shown in Table 1.

Table 1 Number and percentage of respondents classified by gender

Gender	Frequency	Percentage
Male	3	10.34
Female	26	89.66
<b>Total</b>	<b>29</b>	<b>100.00</b>

From Table 1, it was found that most students studying in the Bachelor of Accounting program and studying Accounting Research Methodology in the second semester of the 2016 academic year at the fourth-year level were mostly female, 26 (89.66 percent).

2. Analysis of opinion data on learning achievement according to the Higher Education Qualifications Framework by using Descriptive Statistics method, i.e., mean and standard deviation, presenting the data in tabular form along with the Describe and summarize the results of the research by scoring the answers to the questionnaire as follows (Srisa-ard, B. 2013:99-100).

The highest level of opinion is assigned 5 points.

The high opinion level is assigned 4 points.

Moderate opinion level is assigned 3 points.

The low opinion level is assigned 2 points.

The lowest opinion level is assigned 1 point.

The scores were then averaged by using the criteria for interpreting this mean (Srisa-ard, B. 2013:103) as follows:

Mean 4.51–5.00 indicates the highest level of opinion.

Mean 3.51–4.50 means there is a high level of opinion.

Mean 2.51–3.50 means that the opinion is moderate.

Mean 1.51–2.50 means there is a low level of opinion.

Mean 1.00–1.50 means having the lowest level of opinion.

**Table 2** Opinions about academic achievement according to the framework of tertiary qualifications of accounting students studying in the Accounting Research Methodology course

Achievement according to the tertiary qualification's standard framework	$\bar{x}$	S.D.	Mean
1. Ethics and Moral	4.40	0.46	High
2. Knowledge	4.45	0.47	High
3. Cognitive Skills	4.30	0.45	High
4. Interpersonal Skills and Responsibility	4.56	0.46	Highest
5. Numerical Analysis, Communication, and Information Technology Skills	4.60	0.48	Highest
<b>Total</b>	<b>4.43</b>	<b>0.44</b>	<b>High</b>

From Table 2, it was found that the opinions about the academic achievement according to the tertiary qualification's standard framework of accounting students who studied accounting research methodology, in general, were at a high level ( $\bar{x} = 4.43$ ), (S.D. = 0.44). When considering each aspect, it was found that there were two of the highest levels as follows: Numerical Analysis, Communication and Information Technology Skills ( $\bar{x} = 4.60$ ), (S.D. = 0.48), Interpersonal Skills and Responsibility ( $\bar{x} = 4.56$ ), (S.D. = 0.46), and are at a high level in the amount of 3 aspects, arranged in descending order as follows: Knowledge ( $\bar{x} = 4.45$ ), (S.D. = 0.47), Ethics and Moral ( $\bar{x} = 4.40$ ), (S.D. = 0.46), and Cognitive Skills ( $\bar{x} = 4.30$ ), (S.D. = 0.45)

**Table 3** the scores for measuring the level of knowledge and understanding in the accounting research methodology course of the students in the accounting department of group 3

No.	(full score 100 points)
1	85.75
2	72.52
3	80.93
4	75.37
5	75.28
6	77.36
7	66.80
8	82.55
9	72.99
10	82.74
11	71.77
12	76.55
13	81.83
14	76.55
15	77.69
16	77.34
17	86.22
18	81.15
19	71.14
20	82.07
21	70.73



No.	(full score 100 points)
22	83.17
23	86.93
24	74.96
25	82.53
26	81.43
27	84.67
28	75.48
29	62.94
30	83.74
31	71.36
32	74.07
Sum	2,486.62
Mean	77.71
S.D	5.89

From Table 3, the results of the analysis of the level of knowledge and understanding of the subjects of the students in the 3rd group who used the teaching and learning process of integrated knowledge-based teaching and learning process, it was found that the overall level of understanding was 77.71 (SD = 5.89). It showed that the level of knowledge and understanding of the course from the integrated knowledge-based teaching and learning process resulted in the learners having a very good grade.

3. Data analysis of cognitive opinions about the course content using descriptive statistical processing methods Descriptive Statistics (mean and standard deviation) which presents information in tabular form along with lectures and summarize the results of the research by assigning scores to the answers to the questionnaire as follows (Srisa-ard, B.2013:99-100).

A grade of 80-100 marks GPA=An Excellent academic performance.

A grade of 75-79 marks GPA=B+Very good grades.

A grade level of 70-74 requires GPA=B good academic performance.

A grade of 65-69 marks GPA=C+ quite good grades.

Grade level 60-64 points GPA=C satisfactory.

Academic grades 55-59 points require GPA=D+ Good grades.

A 50-54 grade level requires GPA=D, a minimum passing grade.

A grade below 50 requires that GPA=F is below the minimum grade.

**Table 4** The results of measuring the level of knowledge and understanding in the accounting research methodology course of accounting students

Knowledge and understanding (Achievement)	Frequency	Percentage
GPA = A	14	48.28
GPA = B+	8	27.59
GPA = B	6	20.69
GPA = C+	-	0.00
GPA = C	1	3.45
รวม	29	100.00



From Table 4, it was found that the results of the analysis of the level of knowledge and understanding in the overall accounting research methodology course were at A level, with an average score of 80-100 points (48.28%), followed by B+ with an average score of 75-79 points (27.59%), Level B is 70-74 points (20.69 percent).

## Conclusion

The research report on learning achievement according to the framework of higher education qualifications and knowledge and understanding, by using an integrated teaching technique, knowledge of accounting research methodology of 4 th-year students in the accounting field, Faculty of Management Science, Maha Sarakham Rajabhat University, the results are as follows.

1. The level of opinions regarding the academic achievement according to the framework of tertiary qualifications of accounting students who studied accounting research methodology overall was at a high level ( $\bar{X} = 4.43$ ), (S.D.= 0.44). When considering each aspect, it was found that there were two of the highest levels as follows: Numerical Analysis, Communication and Information Technology Skills ( $\bar{X} = 4.60$ ), (S.D.= 0.48), Interpersonal Skills and Responsibility ( $\bar{X} = 4.56$ ), (S.D.= 0.46), and are in the 3 levels in descending order as follows: Knowledge( $\bar{X} = 4.45$ ), (S.D.= 0.47), Ethics and Moral ( $\bar{X} = 4.40$ ), (S.D.= 0.46), and Cognitive Skills ( $\bar{X} = 4.30$ ), (S.D.= 0.45).

2. The level of knowledge and understanding of the subjects of the students in the 3rd group who used the integrated teaching and learning process found that the overall level of knowledge gained was 77.71 average (S.D.=5.89). It showed that the level of knowledge and understanding of the course from the integrated knowledge-based teaching and learning process resulted in the learners having a very good grade.

3. The overall results of the analysis of knowledge and understanding in the accounting research methodology course were at A level, with a mean score of 80-100 (48.28%). followed by B+ with an average score of 75-79 (27.59%). And Level B is 70-74 points (20.69 percent).

## Recommendation

**Suggestions for applying the results of the study:** To be able to apply teaching management guidelines using other or new teaching techniques to be in line with the course to enhance all 5 learning skills according to the TQF framework in other courses in the curriculum.

**Suggestions for further research:** Study from all populations studied in the program to ensure that students receive a uniform teaching and learning approach.

Integrate teaching and learning management for research and knowledge creation or producing quality teaching and learning materials.



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