Course Management Based on Outcome-Based Education (OBE) of Learning by Working in Real Conditions

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Abstract

Course management based on Outcome-Based Education (OBE) of learning by working in real conditions was used in teaching and learning in the subject of the seminar in entrepreneurship management and innovation in semester 2/2019 of the faculty of business administration, 35 students. Outcome-Based Education's conceptual and theoretical teaching management model would be incorporated into the teaching and learning process.

The results of course management based on Outcome-Based Education (OBE) of learning by working in real conditions showed that the outcome for the learners consisted of five areas: 1) participation/engagement of the learners 2) learning behavior 3) motivation 4) attitude of the learner and 5) learning achievement. Overall, all aspects were at a very good level. The results for the instructor consisted of 2 areas: 1) attitude of new learning management and 2) teaching behavior. In addition, it was found that teachers became more aware of learning, cognitive skills, and had a clearer picture of the new learning management in line with the 21st century and the preparation of teaching and learning planning to be more systematic. It also found that teachers were satisfied and interested in developing new learning management practices that were consistent with Outcome-Based Education's concepts and theories.

Keywords: Course Management, Outcome-Based Education, working in real conditions

Introduction

Thailand 4.0 is the implementation of the goals of the strategy "Thailand 4.0" and is the starting point of the 20-year national strategy to drive concrete and sustainable prosperity and economy through innovation. Thailand has the opportunity to become a high-income country in terms of less is more, reducing foreign dependence, reducing inequality while creating economic and social balance. This requires the transition from commodities to innovative products and expand it to become a competitive advantage (Suwit Maesincee, 2016). Course on Outcome-Based Education (OBE) is the philosophy of education. It states that education should be aimed at producing specific early students' learning outcomes, knowledge and competencies. The curriculum and teaching methods are designed to be able to produce students with such knowledge and abilities. Learning outcomes are expectations in the sense that students will be able to meet the learning outcomes of a learning activity and Outcome-Based Education. The
outcome-specific process controls the teaching and learning activities in Outcome-Based Education for all courses. The teaching and learning are tailored to the specific characteristics of the students once they have completed their studies. Learning outcomes according to National The 2017 Qualifications Framework: NQF) refers to the learning qualification criteria and the learning outcomes arising from the learning process as the learning standards of the curriculum established at each level and educational type and / or the experience arising from practice and / or from work consisting of 3 dimensions: 1) Knowledge refers to knowledge of facts, principles, theories and practices relevant to the field of study / work, with an emphasis on theoretical knowledge and / or facts. 2) Skill refers to the ability to perform tasks. A person should do so when assigned. Managed and problem-solving methods can be chosen by employing cognitive skills in areas related to logical, intuitive, and creative thinking or practical skills / practice with fluency and proficiency in implementing the framework of each level of qualifications. 3) application and responsibility refer to a person's competence arising from the learning process and the use of knowledge, social skills in work / education for the professional development of the person. It consists of the ability to communicate, leadership, responsibility, and autonomy to act on their own such as the ability to make decisions and take responsibility for oneself and others. The standard of learning outcomes is a specific requirement, an outcome intended for the learner to develop the five areas of learning gained during their studies and participation in various activities organized by higher education institutions, both internal and external courses. It is also a credible demonstration of the knowledge, understanding and competence gained from those learning at the end of the course.

Therefore, it is a response to the policy of reforming Thai higher education for the development of manpower and capacity building according to Thailand 4.0 strategy and is the beginning of the 20-year national strategy. Educational management is to produce a competent workforce to meet the needs of graduate users in their work. The researchers are therefore interested in conducting research on “Course Management Based on Outcome-Based Education of Learning by Working in Real Conditions” to support the expansion of real-world learning course, responding to the Thai higher education reform policy on the development of manpower and building competitiveness to support the New S-Curve. It also raises the standard of learning at the bachelor level. The management of the teaching and learning process focuses on creating a practical learning experience in a real-world environment to improve course learning management while modernizing the teaching and learning process and in line with labor market demand. This is to continue to produce graduates who meet market demand with knowledge, skills and professional experience.

Research objectives

1. To study the effects of learners and teachers in results-oriented course of hands-on learning.

2. To study assessing students’ opinions on outcomes-oriented course management by working in real conditions.

Research hypothesis
Hypothesis 1: Participation / engagement with learner influenced students to course management based on Outcome-Based Education of learning by working in real conditions

Hypothesis 2: Outcomes-Based Education in terms of learning methods and learning atmosphere affected students' satisfaction with course management based on Outcome-Based Education of learning by working in real conditions.

Expected benefits

1. Theoretical benefits: Universities and researchers can apply the concepts and theories involved in this research to explain the outcomes for learners and teachers on course management based on Outcome-Based Education

2. Practical benefits: Universities can use the findings of this research to guide further improvement and development of university services.

Literature review

In the past, education was considered an uplifting of life, a promotion of social status. The post-graduate degree was invaluable as it meant a great opportunity to jump straight into work. Currently, as there was an increasing number of graduates and graduating at the university level was no longer a guarantee of employment. Moreover, traditional learning frameworks were achievement-oriented, which made it difficult for many people to fail to find their own aptitudes. As technology evolved, the value of education and learning was changing. Since the 1980s, the learning direction had changed dramatically as a result of the intensifying influence of globalization. With the revolution in technology and communication, the world had moved from "industrial age" to "post-industrial" where the social economy was based on "knowledge base". Information, knowledge, and innovation were key drivers of the economy, which meant that the skill requirements of human resources were different. A study of the content of 21st century education and learning found signs of possible changes in the university organization, which was the main institution of higher education. It was divided into 3 aspects: substance, methods and tools and organization. As the subject matter changes, methods and tools must be adjusted accordingly, which are divided into 6 types as follows. 1) Digital learning: The digital learning area was another area of life for ordinary people and become an important opportunity and choice of learning accessible to everyone. People could learn anywhere and anytime. It was also compliant with mobile culture and the internet of things, which were driven by ICT technology, the virtual learning area played a role in replacing the traditional physical learning area. Moreover, massive open online course (MOOC) or other online lessons were emerging. The more COVID-19 emerges, the possibilities for digital learning had increased. 2) Method of self-learning: Each person had different learning styles. A variety of learning spaces provided students with the opportunity to have a more complete self-learning ecosystem. On the other hand, the barriers to self-learning depended on the learner's basic ability, but the support system from the network or the learning community remained important. 3) Year-round school: The open education system and the no time frame learning model diluted the conceptual framework of the semester and replaced it with a full-year academic calendar. As a result, educational institutions needed to adjust their relevant activity plans ranging from physical resource
planning, learning measurement system, budgeting, etc. to accommodate this change. 4) Future learning: Developing a physical learning space that responds to future learning directions, whether in terms of physical space or online space, it was important to develop a new form of physical learning space that was consistent with future learning directions such as modifying and building flexibility in classroom, classroom with face-to-face interaction between teachers and learners, different types of classrooms suitable for bringing your own device (BYOD) to co-working space and virtual reality (VR) classrooms for immersive learning, etc. 5) Connection between the university and the community: Learning must be done through hands-on. Innovative research and development continued to be the mission of leading universities, so it was important to establish a connection between the university and the outside community. This connection spanned research funding, staff and physical resources such as laboratories, instruments, equipment, etc. to create an ecosystem that was conducive to innovative research and development, which could be further extended to practical use and economic value creation. 6) Resource management based on digital infrastructure and database management: It improved efficiency in planning, monitoring, auditing and evaluation. It also encouraged full utilization of existing resources on the principle of sharing and breaking barriers between agencies and organizations. Digital infrastructures and databases enabled more efficient resource management and surveillance systems development, planning, auditing and evaluation. The original resource was stimulated for greater utilization on the basis of sharing and breaking barriers between agencies and organizations (Urbanis, 2021).

The conceptual framework of the research emerged from 21st century skills. Bellance & Brendt (2010) offered a conceptual model of 21st century skills with a wide range of elements and skills. The researchers were interested in the concept of Outcome-Based Education, that is the learner-centered approach and the teacher organizes the "learning" process. Classroom lectures were only "activities" or a way to lead learners to "results". Learning would change from Lecture-based Learning to Activity based Learning. There were a number of methods and techniques for this change, but the most important ones included the "Problem-based Learning", "Project-based Learning" and "Service Learning" methods. All of these were Activity-based Learning or Active learning that was an Outcome-Based Education learning model (Rungroje Songsraboon, 2019) (shown in Figure 2).

![Figure 2 Outcome-Based Education (OBE)](Rungroje Songsraboon, 2019)
Methodology

1. The population was 35 students who studied the subject of seminar in entrepreneurship management and innovation of the Faculty of Business Administration, a university.

2. The sample group was 32 students who studied the subject of seminar in entrepreneurship management and innovation of the Faculty of Business Administration, a university. According to Krejcie & Morgan, confidence level is 95% and error 5% (Krejcie & Morgan, 1970).

3. The tools used in this research were questionnaires. The researcher created this questionnaire to collect data on course management that focuses on real-world learning outcomes and is divided into two parts:

   **Part 1** was a questionnaire on the outcome of curriculum management based on real working learning outcomes such as participation / engagement, active learner (behavior), motivation, and attitude. The questionnaire used a Likert 5-level scale and could be divided into 5 levels of importance: highest, high, medium, low and lowest.

   **Part 2** was a questionnaire on the level of satisfaction with course management based on learning outcomes by working in real conditions such as learning methods and learning atmosphere. The questionnaire used a Likert 5-level scale and could be divided into 5 levels of importance: highest, high, medium, low and lowest.

4. The researcher collected data using convenience sampling from questionnaires of 32 students in the classroom. Data were collected from February 2019 to April 2019.

5. Data analysis was done by using a statistical package to analyze the curriculum that focuses on learning outcomes by working in real conditions such as the frequency distribution, mean, percentage, standard deviation, and the statistics used to find the quality of the questionnaire. The result of cronbach's coefficient alpha was 0.914.

6. Research ethics data were collected using questionnaires from 32 students who studied the subject of seminar in entrepreneurship management and innovation of the Faculty of Business Administration, a university. The investigator informed the key informant of the research objective prior to collecting the data. Data collection was then carried out in a relaxed atmosphere so that the key informant could provide the information independently. However, this research may have an impact on the key informant, so the key informant's name and surname were not revealed. The researcher adhered to the principles of research ethics and the confidentiality of the key informant.

Research results
The objective 1 was to study the outcomes for learners and teachers in course management based on Outcome-Based Education (OBE) of learning by working in real conditions.

1. Learners

The study of the results that occurred to the learners in course management based on Outcome-Based Education of learning by working in real conditions found that the outcome for the learner could be presented in 5 areas: 1) participation / engagement 2) learning behavior 3) motivation 4) attitude, as shown in Tables 1 and 5) learning achievement. Overall, all aspects were at a highest level, as shown in Table 2.

Table 1 Four outcomes of students in a course based on Outcome-Based Education (OBE) of learning by working in real condition in four areas

<table>
<thead>
<tr>
<th>Outcomes of students</th>
<th>Mean</th>
<th>S.D</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Participation / Engagement with learner</td>
<td>3.65</td>
<td>0.33</td>
<td>Very good</td>
</tr>
<tr>
<td>2. Learning Behavior</td>
<td>3.45</td>
<td>0.45</td>
<td>Very good</td>
</tr>
<tr>
<td>3. Motivation</td>
<td>3.50</td>
<td>0.44</td>
<td>Very good</td>
</tr>
<tr>
<td>4. Attitude of learner</td>
<td>3.40</td>
<td>0.65</td>
<td>Very good</td>
</tr>
<tr>
<td>Total</td>
<td>3.50</td>
<td>0.46</td>
<td>Very good</td>
</tr>
</tbody>
</table>

The results of hypothesis 2 found that the course management based on Outcome-Based Education of learning by working in real conditions in terms of learning method and learning atmosphere had an effect on students’ satisfaction with the course management based on Outcome-Based Education of learning by working in real conditions.

Table 2 Learning achievement of 32 students in a curriculum course based on Outcome-Based Education (OBE) of learning by working in real conditions in semester 2/2019

2. Teachers
The study on the outcomes of teachers in course management based on Outcome-Based Education of learning by working in real conditions found that, the researcher looked at two aspects in detail: attitude and behavior, which could be summarized as follows.

1. **Attitude**: Teachers learnt through innovation in the sense that content-based teaching may not be the best approach, especially in the social sciences, where knowledge would be applied in the future. Through innovation, it became clear that the teaching and learning that emphasized on-the-job learning helped students better understand the content. The analysis, synthesis, problem-solving and knowledge could be applied or readily available to the extent that it led to further academic processes and practical experiments.

2. **Behavior**: Teachers gained a greater understanding and visualization of course management based on Outcome-Based Education of learning by working in real conditions that is more consistent with the 21st century. This resulted in a more systematic learning and planning. It also found that teachers were satisfied and interested in further developing and managing real-world teaching and learning that were consistent with the 21st century for other courses.

The objective 2 was to study how to assess students' opinions on course management based on Outcome-Based Education.

The results of hypothesis 2 found that the course management based on Outcome-Based Education of learning by working in real conditions in the learning method and learning atmosphere had a high effect on learner satisfaction.

**Table 3** Assessment of students' opinions on course management based on Outcome-Based Education of learning by working in real conditions

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Mean</th>
<th>SD</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learners</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The course management based on Outcome-Based Education of learning by working in real conditions should be applied in the entrepreneurial process in order for students to work together. This knowledge could be applied to benefit learning and to have better self-seeking skills.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. There should be a course management based on Outcome-Based Education of learning by working in real conditions so that students are interested and motivated to learn.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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3. Students should be clarified and understood about course management based on Outcome-Based Education of learning by working in real conditions and assessment guidelines.

2. Teachers

1. All teachers are required to understand and deliver Outcome-Based Education by working in a clear environment and considering activities appropriate to the student's time and workload.

2. Teachers should clarify the model of teaching and learning that based on learning outcomes by working in real conditions to students for acknowledgment and understanding. If modifications are made, notice should be made every time to reduce confusion.

3. For the teaching and learning in the above, if there are more than one step, the teachers should understand and plan the teaching and learning in the same direction as the university.

3. University

1. The university should have a clear policy and management, including human resources, which is a supportive. In the teaching planning and preparation process, teachers have to spend more time than normal teaching and learning materials, including modern teaching materials. In addition, staff and skilled learning materials developers are required to assist.

2. Universities should provide ongoing training to educate teachers and related persons and there should be criteria for teachers for learning management that based on Outcome-Based Education of learning by working in real conditions. They are required to undergo training in outcomes-based learning management in three key areas: 1) Concepts and theories in training and learning management that based on Outcome-Based Education of learning by working in real conditions. 2) Patterns and methods of learning and learning management that based on Outcome-Based Education of learning by working in real conditions. 3) assessments such as authentic assessment.

3. Ensure that teachers who will apply Outcome-Based Education of learning by working in real conditions, have the correct knowledge and understanding.

4. The teaching workload should be allocated to suit the nature of learning management that focuses on learning outcomes by working in real conditions.

Suggestions for further study

1. There should be studies and planning to develop course management based on Outcome-Based Education of learning by working in real conditions through joint discussions in the field, setting goals and planning to achieve additional goals.

2. It should analyze the needs of entrepreneurs and set goals for the development of course management that based on learning outcomes by working in real conditions in accordance with the needs of entrepreneurs continuously
3. Preparation should be made to develop the ability of graduates to prepare for their entry into the labor market by providing guidance, learning, adaptation, laboratory practice and preparation in terms of entrepreneurial skills. In addition, other courses are tailored to meet the outcome-based curriculum, with the development of various language skills and the creation of new innovations.

Bibliography