Learning Achievement of Undergraduate students, Exhibition and Event Management,Faculty of Management Science, Silpakorn University, Learning by teaching and learning management in the form of project-based learning[*]

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Abstract

This research aimed to study the learning achievement and opinions of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University, Learning by teaching and learning management in the form of project-based learning by population of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University that studied Facility and Venue Management from112 students in the second semester of the academic year 2018. Research instrument from creating questionnaires for opinions of students. The questionnaire that the students assessed for rating scale 5 levels according to the concept of Likert. From general data analysis results found students who have studied in Facility and Venue Management courses were mostly women 92 persons for 82.14 percent and male 20 persons for 17.86 percent. Most of them had an average grade between 2.50 - 2.99 were 43 persons or 38.39 percent. Following by the average grade between 3.00 - 3.49 were 41 persons or 36.61 percent, average grade between 2.00 - 2.49 were 15 persons or 13.39 percent and average grade between 3.50 - 4.00 were 13 persons or 11.61 percent, respectively. The opinion for learning by teaching and learning management in the form of project-based learning were a high level ($\overline{X}$ =4.09). When considered in each aspect, the average from the highest to the least, it was found the students had the most opinions on the summary and evaluation ($\overline{X}$ = 4.17), followed by the operation ($\overline{X}$ = 4.11) the planning ($\overline{X}$ = 4.10) Thinking and selecting the project topic ($\overline{X}$ = 4.05) the presentation or the preparation ($\overline{X}$ = 4.04) and the report writing ($\overline{X}$ = 3.82) respectively.

The opinions on the evaluation of student in the achievement were a high level ($\overline{X}$ = 4.10). When considered in each aspect, the average from the highest to the least, it was found the students had the most opinion on moral and ethics ($\overline{X}$ = 4.35), followed by the interpersonal skills and responsibilities ($\overline{X}$ = 4.20), knowledge ($\overline{X}$ = 4.00), intellectual skills ($\overline{X}$ = 3.99) and numerical analysis skills, communication and Using information technology ($\overline{X}$ = 3.98) respectively, and the opinions on the evaluation of teaching and learning management model were a high level ($\overline{X}$ = 4.16). When considered in each aspect, the average from the highest to the least, it was found the students had the most opinions on the benefits from teaching and learning ($\overline{X}$ = 4.26), followed by working with others ($\overline{X}$ = 4.16) communication and participation ($\overline{X}$ = 4.15) creativity and innovation ($\overline{X}$ = 4.14) thinking and problem solving ($\overline{X}$ = 4.07) respectively.

Key words: Project-Based Learning**,** Facility and Venue Management, 21st Century Learning

Introduction

From the Facility and Venue Management course, the essentials that students need to know about facility and venue management in the business event. The suitability of the venue, steps for arranging a place, arrangement and decoration of equipment and facilities such as lighting, sound and multimedia systems, regulations of the venue, problems and solutions which the problem for the event makes the teacher **sort out** the problems with Project-Based Learning to understand in the course.

Project-Based Learning is a form of learning that is suitable for studying in the 21st century because it is an activity that focuses on students' interests start with the preparation of teachers, students, facilities, materials, equipment and infrastructure of the university. After that, students choose the problems that will be studied by a teacher who inspires and gives advice. Then, students and teachers plan the project in the form of an action plan or project layout by setting objectives, assumptions, educational boundaries and methods to studying of related theories, implementation of the plan by collecting data, data analysis, finding more information, writing the reports, publishing work to the public and evaluating the project. In each step, students can choose to use the appropriate presentation media to be consistent with the characteristics of students' interests. Project-based learning helps develop competencies and important skills of students in the 21st century.

From these reasons researchers as teachers in Facility and Venue Management course that have seen the importance and benefits in the development of teaching and learning management in the form of Project-Based Learning for the skills of learning in the 21st century for Facility and Venue Management to be a model for other courses as well as to improve and develop teaching and learning in the course and able to create students in the field of exhibition and events management that have good features in accordance with the learning objectives for students in the 21st century from the development of modern and practical subject description which corresponds to the learning outcomes according to Thailand *Qualifications Framework* (TQF) of the development of learning skills of students in 5 areas, moral, ethics, knowledge, intellectual skills, interpersonal skills and responsibility and numerical analysis skills, communication and using information technology correctly and completely.

Objectives of the Study

1. To study the learning achievement and opinions of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University, Learning by teaching and learning management in the form of project-based learning

Expected benefits

1) Students develop creatively and innovation skills, including think creativity.

2) Students develop skills in work creativity with others and bring implement innovations by creative practices for the benefit of development from The result of innovation that is used

3) Students develop critical thinking and problem solving skills, consisting of reason effectively, use systems thinking, make judgments and decision and learning process for solving problems

4) Students develop communication and collaboration skills, consisting of communication clearly and collaborate with others.

5) Students learn the process for organizing events professionally with the method of teaching and learning as project-based learning for learning skills in the 21st century

Literature Reviews

Elements of academic achievement

Academic achievement is a subject that has received a lot of attention in the education industry, but it is very complicated because there are many elements or factors that are variable, which may result in students having academic achievement different. Many language teaching experts have proposed elements of academic achievement as follows.

Sumitra Angwattanakul summarizes the factors that affect academic achievement by dividing into 4 factors as follows:

1. Factors relating to learners from the concept of behaviorism psychologists believe that all people are able to learn everything if there is stimulation and reinforcement. Learning is a mechanical process that is controlled from things outside, but cognitive psychologists believe that learners play an important role in learning, knowledge and intelligence, as well as the learning process of learners, which is the most important factor for academic achievement. Teachers are only responsible for teaching, but students are responsible for learning.

2. Factors relating to the learning environment of schools are not dependent on factors relating to students or teaching and learning.

3. The general environment, family environment and environment that is not caused by the students themselves.

4. Factors relating to teaching and learning factors and the context of teaching and learning factors including factors of teaching and learning activities both inside and outside the classroom and the purpose of teaching.

Therefore, it can be concluded that the elements that influence academic achievement consist of

1. The learners include behavioral, knowledge, psychology, readiness in the body and characteristics of the group of learners and behavioral features.

2. The instructors include the quality of teaching, the characteristics of the instructor's teaching behavior.

3. The environment, including the living conditions of the family, society, good management system.

21th Century Curriculum & Instruction

21th Century Curriculum & Instruction focuses on the interdisciplinary of core subjects to create opportunities to apply integrated skills across content and create competency-based system, create innovation and integrated learning methods with technology to support Search-based learning and learning methods from using problem-based for the creation of high-level thinking skills. (Surasak Paje, 2555) The 21st century learning and development of teaching and learning based on the concept of Paitoon Sinlarat (2555) include student center learning, self-directed learning, collaborative learning, project based learning, problem-based learning and using e-portfolio in teaching and learning.

Project based learning is based on experiential learning and the philosophy of John Dewey (Coffey, 2008) BIE (Buck Institute for Education) has given the definition of learning by using project-based learning as a teaching system that will lead students to learn and skills through complex problem-solving processes, challenging problems that cannot be answered by memorization. The duration of the project may use a variety of knowledge. (Coffey, 2008) explained that project-based learning is based on complex missions. Challenging questions or problems for students are involved in the design, problem solving and decision-making or activities that require investigation and give students the opportunity to work independently during a specified period of time which results in practical results. The project is designed to stimulate the research and using advanced thinking skills. The students' perceptions will be elevated when participating in meaningful problem-solving activities and when students gain knowledge of those skills. (Intel @ Teach Program, 2007)

Research Method
Population

The population including undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University that studied Facility and Venue Management from 112 students in the second semester of the academic year 2018.

Research Instrument

To create a questionnaire for students' opinions to study the academic achievement and opinions of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University, learning by teaching and learning management in the form of project-based learning with the objective to ask the opinions of the students,

which the questionnaire for the students to evaluate rating scale 5 levels according to the concept of Likert by there are steps to create as follows.

1. Study the theory and method of creating questionnaires from texts and documents to be a guideline for creating questionnaire.

2. Create a questionnaire to study the academic achievement and opinions of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University, Learning by teaching and learning management in the form of project-based learning with criteria for evaluating opinions on 5 levels of knowledge management systems, including highest, high, moderate, low, lowest. The analysis of the score as follows.

       5 points   means Highest

       4 points means High

       3 points means Moderate

       2 points means Low

       1 point   means Lowest

3. Lead the questionnaire was created by 3 experts to verify the consistency (IOC) by experts to consider as follows.

+1 Sure that the list is considered the comments questionnaire consistent with the content.

0 Not sure, that the list is considered the comment questionnaire consistent with the content.

-1 Sure that the list is considered the comment questionnaire not consistent with the content.

The results of the examination showed that the IOC value is not less than 0.5.The test result showed that the IOC was 0.833

4. Reliability of questionnaire by using the formula to find Alpha coefficient based on Cronbach's method (1970) to test the reliability of the questionnaire. The test results showed that the reliability of questionnaire with the undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University, learning by teaching and learning management in the form of project-based learning was 0.969.

Data Collection

The quantitative data, data collection by find basic statistics such as Mean, Standard Deviation and Percentage.

A quantitative approach by using self-completed questionnaires were administered. The questionnaires were distributed between the semester of the academic year 2561 (January 2019 - June 2019) of 112 questionnaires were distributed to the respondents. The respondents were asked to complete a survey questionnaire. The respondents were informed concerning the purpose of the study and general instructions were provided and help was offered when needed. The responses were confidential.

Results

Part 1 General Data

General data analysis of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University that studied in Facility and Venue Management courses in total of 112 persons, as shown in Table 1 - Table 2

Table 1 Number and percentage of students that studied in Facility and Venue Management classified by gender

Gender	Number	Percentage
1. Male	20	17.86
2. Female	92	82.14
Total	**112**	**100.00**

From Table 1, it was found that the students who studied in Facility and Venue Management were mostly women 92 persons for 82.14 percent and male 20 persons for 17.86 percent.

Table 2 Number and percentage of students that studied in Facility and Venue Management classified by GPA

GPA	Total	Percentage
1. Between 2.00 - 2.49	15	13.39
2. Between 2.50 - 2.99	43	38.39
3. Between 3.00 - 3.49	41	36.61
4. Between 3.50 - 4.00	13	11.61
Total	**112**	**100.00**

$\overline{X}$ = 2.97, S.D. = 0.41, max = 3.91, min = 2.00

From Table 2, it was found that most of the students who studied in Facility and Venue Management courses had an GPA between 2.50 - 2.99, 43 persons, or 38.39 percent, followed by GPA between 3.00 - 3.49, 41 persons, or 36.61 percent, GPA between 2.00 - 2.49, 15 persons, or 13.39 percent and GPA between 3.50 - 4.00, 13 persons, or 11.61 percent, respectively.

Part 2 the results of data analysis in the assessment of teaching and learning management in the form of project-based learning

Data analysis in the assessment of teaching and learning management in the form of project-based learning for learning skills in the 21st century for Facility and Venue Management of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University, total 112 persons, as shown in Table 3

Table 3 Average and standard deviation of opinions on teaching and learning management in the form of project-based learning in overall

Assessment of teaching and learning management in the form of project based	Level of Comments			
	$\overline{X}$	S.D.	Level	sequence
1. Thinking and selecting project topics	4.05	0.51	High	4
2. Planning	4.10	0.59	High	3
3. Operation	4.11	0.51	High	2
4. Report writing	3.82	0.64	High	6
5. Presentation or project preparation	4.04	0.54	High	5
6. Summary and assessment	4.17	0.57	High	1
Total	4.09	0.68	High	

From Table 3, it was found that the opinions on teaching and learning management in the form of project-based learning in overall were at a high level ($\overline{X}$ =4.09). When considered in each aspect by sorting the average from the highest to the least, it was found that the students had the most opinions on the summary and assessment ($\overline{X}$ =4.17), followed by the operation ($\overline{X}$ =4.11), the planning ($\overline{X}$ =4.10), Thinking and selecting project topics ($\overline{X}$ = 4.05) and presentation or project preparation ($\overline{X}$ = 4.04) and report writing ($\overline{X}$ = 3.82) respectively.

Part 3 the results of data analysis in assessment for academic achievement of students

Analysis of academic achievement data of undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University that studied by teaching and learning management in the form of Project-Based Learning, total 112 persons as shown in Table 4.

Table 4 the average and standard deviation of opinions on the assessment for academic achievement of students in the overall

Assessment for academic achievement of students	Level of comments			
	$\overline{\mathrm{X}}$	S.D.	Level	sequence
1. Moral and ethics	4.35	0.53	High	1
2. Knowledge	4.00	0.59	High	3
3. Intellectual skills	3.99	0.60	High	4
4. Interpersonal skills and responsibilities	4.20	0.58	High	2
5. Numerical analysis skills, communication and using information technology	3.98	0.61	High	5
Total	4.10	0.48	High	

From Table 4, it was found that the opinions on the assessment for academic achievement of students in the overall were at a high level ($\overline{\mathrm{X}}$ =4.10). When considered in each aspect by sorting average from highest to lowest, it was found students had the most opinions on moral and ethics ($\overline{\mathrm{X}}$ =4.35), followed by Interpersonal skills and responsibilities ($\overline{\mathrm{X}}$ =4.20), knowledge ($\overline{\mathrm{X}}$ = 4.00), intellectual skills ($\overline{\mathrm{X}}$ = 3.99) and numerical analysis skills, communication and Using information technology ($\overline{\mathrm{X}}$ = 3.98) respectively.

Part 4 the results of data analysis for assessment of teaching and learning management in the form of Project-Based Learning

Data analysis of opinions on undergraduate students, Exhibition and Event Management, Faculty of Management Science, Silpakorn University by teaching and learning management in the form of Project-Based Learning for learning skills in the 21st century for Facility and Venue Management, total of 112 persons, as shown in Table 5

Table 5 Average and standard deviation for opinions on assessment of teaching and learning management in the form of Project-Based Learning in the overall.

Assessment of teaching and learning management in the form of Project-Based Learning	Level of comments			
	$\overline{X}$	S.D.	level	sequence
1. Creativity and innovation	4.14	0.54	High	4
2. Creative work with others	4.16	0.52	High	2
3. Critical thinking and problem solving	4.07	0.60	High	5
4. Communication and participation	4.15	0.56	High	3
5. Benefits from teaching and learning	4.26	0.58	High	1
Total	4.16	0.48	High	

From Table 5, it was found that the opinions on the assessment of teaching and learning management in the form of Project-Based Learning in the overall were at a high level ($\overline{X}$ = 4.16). When considered in each aspect by sorting average from highest to lowest, it was found that the students had the most opinions on the benefits from teaching and learning ($\overline{X}$ = 4.26), followed by creative work with others ($\overline{X}$ = 4.16), communication and participation ($\overline{X}$ = 4.15), Creativity and Innovation ($\overline{X}$ = 4.14) and the critical thinking and problem solving ($\overline{X}$ = 4.07), respectively.

Discussion and Conclusions

From the results of the data analysis, the assessment of teaching and learning management in the form of Project-Based Learning, it was found that the opinions on teaching and learning management in the form of Project-Based Learning in the overall were at high level ($\overline{X}$ = 4.09). When considered in each aspect by sorting the average from highest to lowest, it was found that students had the most opinion on summary and assessment ($\overline{X}$ = 4.17) correspond to Nowak & Plucker, (2002) which suggested that assessment of Project-Based Learning should invite qualified non-teachers to jointly evaluate student performance for accuracy and make valuable work. In this evaluation, invited personnel working on event organizers directly to summarizing and evaluating the results of the event as well. Followed by the operation ($\overline{X}$ = 4.11), planning ($\overline{X}$ = 4.10), correspond to Pimpan Dachakupt (2547) that said learning by using the project, students must use scientific methods by searching for answers to problems by themselves. Project results, students will gain new knowledge and new inventions. Teachers as facilitators which the project-based learning has operational

procedures, starting from thinking and choosing topics or problems to be studied. Project planning, project implementation, project report writing and project performances (Somchai Ngawpok, 2551, refer to Wimonrat Soonthornrojana, 2545) and learning management by using the project, resulting in learners develop learning and create knowledge by themselves, promote thought processes and solve problems. Students can work with others and practice leadership and good followers to be able to solve problems in daily life. (Supin Dissakun 2545; Chatee Kedtum , 2547)

From the results of data analysis from assessment academic achievement of students, it was found that the opinions on the assessment academic achievement of students in the overall were at a high level ($\overline{X}$ = 4.10). When considered in each aspect by sorting average from highest to lowest, it was found that students had the most opinion on moral and ethical ($\overline{X}$ = 4.35), followed by the interpersonal skills and responsibility, correspond to Brandsford, Brown, & conking (2000, p. 23, referenced in intel @ Teach Program, 2007) that said he potential for recognition New things of students will be elevated when participating in meaningful problem-solving activities and when students receive help to understand that their knowledge and skills are related for any reason, when and how, and Guzdial (1998) said providing students with a project is an opportunity for learners to enter the process of inquiry, which is a process that requires students to use complex, advanced ideas. Therefore, it is a good way to develop the intellectual process of learners. Project-based learning also helps learners develop the process skills in the investigation and solving the problem, in addition it help learner create responsibility and ability to work as expected

From the results of the data analysis, the assessment of teaching and learning management in the form of Project-Based Learning, it was found that the opinions on the assessment of teaching and learning management in the form of Project-Based Learning in the overall were at a high level ($\overline{X}$ = 4.16). When considered in each aspect by sorting average from highest to lowest, it was found that students had the most opinion on the benefits received from teaching and learning ($\overline{X}$ = 4.26) correspond to Guzdial (1998), which said that providing students with a project is an opportunity for learners to enter the process of inquiry, which is a process that requires students to use complex, advanced ideas. Therefore, it is a good way to develop the intellectual process of learners. Project-based learning also helps learners develop the process skills in the investigation and solving the problem. From project base learning, resulting in students receiving good knowledge and experience. When students learn from the issues they need to know and create knowledge by themselves, it will result in

students having academic achievement through the specified criteria. Followed by creative work with others ($\overline{X}$ = 4.16) correspond to Sayamon Insaard (2555) that said Project-Based Learning is a teaching and learning management that students learn by themselves from choosing what they are interested in to learning by having an instructor or expert to consult closely.

Recommendations

1) From teaching and learning by using project based learning in the course of Facility and Venue Management focus on processes of group working, responsibilities of group members. Therefore, students must be prepared to create understanding in the teaching and learning process and give an opportunity student to choose projects based on their interests and appropriateness to apply knowledge in life.

2) teaching and learning by using project based learning in the course of facility and venue management can be applied for other course content, while the activity assignment must be considered in accordance with that course for effective teaching and learning. Students can create knowledge by themselves or develop skills such as teamwork skills, thinking skills, problem solving, synthesis linking between data including summaries that have occurred in the course of Facility and Venue Management, because students are 2nd year students, the ability to synthesize the links between all information and summaries may not be fully developed.

Recommendations for further study

Studying of the results of teaching and learning in other courses should be used project-based learning with other features such as problem solving capabilities, analytical ability, think creativity or internal factors that will affect the development of advanced thinking skills by using project-based learning etc.

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