

Group Learning for the Design of Human Resource Development for Enterprise

Hao-Hsi Tseng, Hsin-Yun Lee, Yu-Cheng Kuo

Abstract—In order to understand whether there is a better than the learning function of learning methods and improve the CAD Courses for enterprise's design human resource development, this research is applied in learning practical learning computer graphics software. In this study, Revit building information model for learning content, design of two different modes of learning curriculum to learning, learning functions, respectively, and project learning. Via a post-test, questionnaires and student interviews, etc., to study the effectiveness of a comparative analysis of two different modes of learning. Students participate in a period of three weeks after a total of nine-hour course, and finally written and hands-on test. In addition, fill in the questionnaire response by the student learning, a total of fifteen questionnaire title, problem type into the base operating software, application software and software-based concept features three directions. In addition to the questionnaire, and participants were invited to two different learning methods to conduct interviews to learn more about learning students the idea of two different modes. The study found that the ad hoc short-term courses in learning, better learning outcomes. On the other hand, functional style for the whole course students are more satisfied, and the ad hoc style student is difficult to accept the ad hoc style of learning.

Keywords—Development, education, human resource, learning.

I. INTRODUCTION

FUNCTIONAL learning method focuses on learning transfer and instilling the stated objectives of the project. However, students receive education in the process, often only the pursuit of good grades and scores and rote, rather than the culture of learning instinct, resulting in students' lack of independent thinking and exploration of space. The disadvantage functional learning methods also appear in the application software among the learning process. Students lack the opportunity to think, while teachers will also feel the same learning content boring, resulting in the situation of teachers ignoring students' learning, students cannot understand the teachers trying to convey the content, so that the effect of learning is getting worse, eventually became "duck education. Many educational researchers try disadvantage to the project to improve learning function-oriented learning. For example, the project is a construction of learning-oriented learning methods, through more complex and real cases, training students to learn how to set the theme, gather information, solve problems and complete projects learning methods. For students in the field of civil construction, building information modeling software Revit learning has become an important learning project. In order to understand whether there is a better than the learning

function of learning methods, this study design are two different modes of learning courses in comparative analysis of the effectiveness of learning. Via a post-test, questionnaires and interviews with students discuss the comparison of the two learning mode under, and the difference of learning outcomes and student learning satisfaction.

The purpose of this study is the comparison function learning and learning effectiveness of project learning, which explore the differences between the two modes of learning, and to understand their strengths and weaknesses. In this study, the design of these two different modes of learning curriculum, the school curriculum as a learning Revit 2013 software and Autodesk official authorized reference materials prepared lecture notes. Through after-school examinations, questionnaires and interviews with the participants to understand the differences and advantages and disadvantages of the two modes of learning and to discuss the timing of the two learning mode applicable, provide a reference direction when planning future learning.

II. LITERATURE REVIEW

A. Functional Learning

Although traditional learning since ancient times has been used for a long time, but there are also traditional learning certain disadvantages, it has often been criticized as "cramming" education, many teachers and students often also feel frustrated and helpless. The traditional learning system is usually called as the functional learning method. Functional learning methods, although easy to implement, but the scholar Lin Yong, who believe that a functional learning materials through education, without consideration of individual differences of learners, more emphasis on the teacher's explanations, the students than those without a sense of participation, leading to lack of teacher-student interaction,

In the functional learning mode, learners come from the only source of information is an established teacher or textbook [1]. If the teacher only focuses on the process of learning, rather than the situation of learners, some learners will be unable to learn. Then the learning outcomes are getting worse and worse since the learners have no sound and appropriate learning materials and learning development media. In addition, the learners in the class cannot deliberate the process, and cannot achieve their learning goals.

Nattiv [2] believes that lower functional learning mode, teachers often regarded as a class as a whole, rather than individual or group, each student who must complete the job alone. However, when the teacher praised the class, often only praise the excellent performance of individual students, rather

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than teamwork among students. In the decision-making class activities carried out, often by teachers take the initiative to make decisions, leading students rarely take the initiative to interact with others or teachers, for active participation in learning, opportunity to make comments. In some spare time, students in order to prepare frequent quizzes, there was insufficient time to complete the assignment good thing; next time how to improve teachers rarely provides correction and guidance.

B. Project-Based Learning

The causes of project-based learning is retroactive from progressive movement, especially Dewey (John Dowe) believed that teachers should lead students to explore and create a natural instinct, and off-campus student experience in providing us a clue to enable students to adjust the curriculum based on students' interests active participation. Katz and Chard think "project type" refers to in-depth discussion and understanding of a topic worth learning, which explore ways by the students individually or in groups, the whole class together [3], [4]. Its purpose is to allow students more active and more creative learning, is no longer a problem to find the standard answer for teacher expectations. PBL is a learning method or strategy, allowing students to develop and practice of scientific inquiry, and get the experience of learning through the inquiry process, the ability of students to solve problems, identify problems and problem-solving process by Reflections pursue their own interests.

PBL is a specific play curriculum integration of learning, team learning as a teacher for the purpose of participating students with special learning activities designed to cultivate students' ability utilize knowledge. For this reason, in studies related to project-based learning, the purpose of the research for the project type activities to explore problem-solving ability of students also abound.

C. Learning Performance Evaluation

To understand the purpose of assessment of learning content and learning quality, assessment of teachers must take diverse and appropriate manner, and learn about the need to improve parts. In 1960s, many educational institutions developed the student assessment models. The learning content and the effectiveness of the quality of the teacher played the main role for students by providing the most direct experience. Many scholars have argued that there are still some obstacles to make sure whether the learning content is the effective index. Therefore, in the process of learning assessment, more and more scholars have emphasized the importance of the students' participation in the evaluation process. Tenbrink thinks that assessment is a method of obtaining information, thus the formation of judgments and decisions [5]. The assessment is the result of careful assessment of the issue, in order to assess the pros and cons and find out the reason, again to decide how to improve the plan of learning process.

Stufflebeam, who believe that the meaning will be different according to the difference of age and researchers, assessment of the following [6]:

1. Depending on the assessment of the test, the result is that the test scores.
2. Depending on the target assessment and comparison of results of the process.
3. Depending on assessment of professional judgment.

Students start their behavior. We try to understand if students already have the knowledge, ability, learning motivation and interest. Learning ability of teachers is from teacher characteristics and learning ability of teachers to understand the attitude of effective learning. Learning performance is to observe teachers in the actual learning performance to ensure quality learning, effective use of learning resources and achieve learning objectives. As educators, the guide is based on student learning outcomes for understanding learners to confirm whether it has reached the learning objectives and effectiveness.

III. LEARNING COURSE PLAN

This chapter explains the Institute of instructional design, including "functional learning" two kinds of "project-based learning," with the situation and explain learning and learning environment. The main purpose of learning functional learning is for students to learn the software function keys to operate, is a lecturer in the operation after the end of the presentation, with learning notes for students to practice using function keys operate in the classroom. Project-based learning of the main purpose of learning allows students to complete a basic structure. Through the process of drawing structure, and based on the process of learning handouts for students to learn how to build a basic structure, which allows students to learn the software function keys. Curriculum design of the present study, the learning methods and student background are not the same, after the end of the course in the same department in a post-test results analysis to explore the effectiveness of learning and student satisfaction.

We arrange a series of functional learning classes for a period of three weeks. The classes include eight hours lecture and one hour for the test. In the course, the instructor explained in depth each function key, the lecturer demonstration operations, so that each student individually exercises software operation.

Project-based learning course in the same school were arranged for a period of three weeks. They also include eight hours lecture and one hour for the test. On the project-based learning, lecturers set out a clear object firstly class required to complete weekly schedule, and used the functional illustrations by the projection screen operation in the mode of learning. To let the students know how to complete each step, we expected to be completed in advance of the target before the class about the instructions clearly.

A. The Learning Environment

The students are provided with the computer operating software that is installed in the sixteen computers. The lecturer digital desk has a computer connected to the projection screen to show process of learning. In addition, in the classroom assistants assisted the lecture to guide the students. The

students firstly looked the screen and listened the lecturer after the operation on the screen, and at the same time they also read the notes to learn the operation of the software.

Learning support by an assistant lecturer with a quiz, there are two assistants having the ability to operate basic functions of software, student aspect is divided into two classes, a group of a total of eight students.

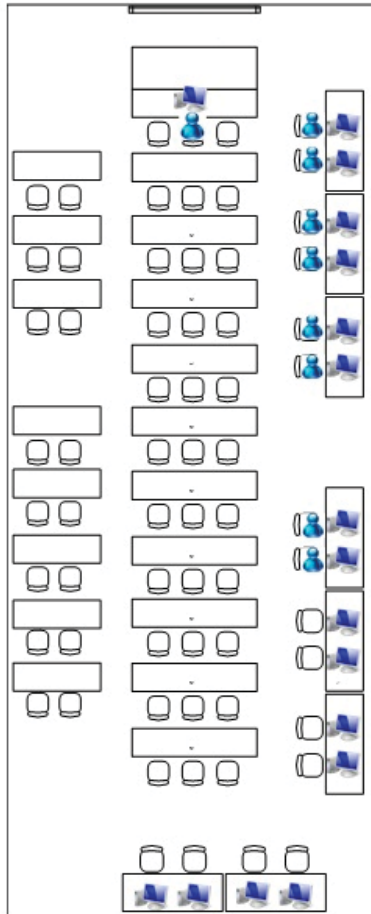


Fig. 1 The learning environment



Fig. 2 The learning process



Fig. 3 The student doing the coursework

B. The Performance of Learning

Learning the answer in the case, we can compare the situation to answer two modes of learning, summed up the following points:

1. The choice of project type of student answer correct rate is higher than the function type of student.
2. Functional style have three students in the third and fourth questions about operating completely no answer, whereby students learn to answer ad hoc style of speed significantly faster than the function type of student, the operation is also relatively smooth fluency.
3. In the multiple choice questions in the more abstruse, functional style higher number of students answered correctly, whereby students learn functional style name for the function keys and their role is more familiar.

C. Questionnaires

At the end of three weeks of courses and tests, the study prepared a simple learning the students were asked to fill out questionnaires a total of eighteen questions, are all multiple choice questionnaire. The first half of a total of three questions, the latter part of Q15 choice five options, namely: strongly agree, agree, no opinion, disagree, and strongly disagree. A total of sixteen participants answer questionnaires, are all Department of Civil Engineering Master Class Ilan University student, functional learning part, the answer is a master student are all students, including part-time students, a total in project-based learning part, answer all the students to master two students, a total of three part-time students.

1. Teaching methods: The students that joined the functional learning believed that there is always a small part of the teacher's students cannot keep up the teaching progress, so the classroom assistant becomes very important. For the structure of course schedule, the course should have the clear progress points, so that students can clearly understand now what to do. In the end of each class, the teacher can design some tasks for today courses related to operating problems, and leave thirty minutes to let the students complete the tasks. Some outstanding students believed that the teaching context is easy to accept, but the step-by-step teaching method is beneficial for students to complete. In addition, they also believed that before class the lecturer can firstly take some time to introduce a brief description of today class content, and after school the lecturer can give a few assignments to the students. Then

the students can go home and review the subject learning content in class. It will help students not only involve the teaching schedule, but also understand the learning performance of daily course.

2. Teaching materials: Through the interview with the students, it is mentioned that the purpose for each chapter is not clear enough. Before the start of this chapter, the lecturer should describe the learning objectives, and help students to have a basic concept. The key points in each page in teaching materials can be highlighted to let everyone know which section is currently studying. It is also beneficial to the teachers to control their own class schedule. For the students, using pictures to render content handout approach is easy to accept. In addition, the teachers can increase the period of the brief introduction before each subsection of chapters, so that the students can be quickly under well learning situation. Besides, it is advised that the lecturers can design some additional detailed handouts to supplement content details for the students learning fast.

IV. CONCLUSION

1. In short-term courses, the learning performance of project-based teaching is better than the function type. From the satisfaction survey questionnaire, it shows that in the function formula satisfactory to students overall curriculum, it is much more difficult for students to accept the type that is short of sufficient course content.
2. From the survey found that two classes have a student said that after completion of the course is no way to properly map out the basic structure of the body, do in-depth analysis of two students in the course content comprehension, better functional reactor, the ad hoc formula indicates objections.
3. Project-based teaching, although good learning results, but in the class, students likely did not keep up the progress of teachers, which led to a large learning gap, the other hand functional teaching, learning though poor results, but the learning process is relatively easy to accept students.
4. In the part of the operating software, the fluency of the ad hoc style student operating style than function more smoothly for students, the other hand functional style of students, although a clear understanding of the position and function of features, but things cannot be learned mastery, which led to operating problems answer the less than ideal circumstances.
5. Duration should make appropriate arrangements to avoid short-term need to accept a large number of student information, and the curriculum was disgusted by the survey results found that, when the total number of courses for teaching satisfaction affect project-based teaching function of teaching than the obvious.
6. Questionnaire analysis revealed that before the start of the course did not use other drawing software experience total of four people, four were ad hoc type of student, four students and a post-test performance did not therefore have experience differ, whereby You know, with or without

graphics software used experience, to learn Revit2013 no direct impact.

7. The future can be considered project-based teaching applications in different fields of teaching, to explore the application of project-based teaching for the direction to enhance the effectiveness of teaching and students learning.
8. Functional teaching is not without merit, if the functional teaching and project-based teaching applications at the same time, take advantage of two different modes of teaching, in the case of the two complementary may have unexpected results.

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