# Experience and Discussion on Promoting the Implementation of Project-Based Curriculum with Evaluation Reform

DOI: 10.23977/aetp.2023.070908

ISSN 2371-9400 Vol. 7 Num. 9

Hongyi Chen<sup>1,a</sup>, Qian Gao<sup>2,b</sup>, Yuyang Zhou<sup>1,c</sup>

<sup>1</sup>Chongqing Bi Academy, Chongqing, 401120, China <sup>2</sup>Chongqing Jianzhu College, Chongqing, 400072, China <sup>4</sup>414016194@qq.com, <sup>b</sup>55666984@qq.com, <sup>c</sup>zhouyuyang27@163.com

**Keywords:** Evaluation reform, Curriculum implementation, Project teaching

Abstract: Project-based teaching, generally speaking, is a teaching activity to cultivate the ability of various professional posts through the joint implementation of a complete project. Students solve problems in corresponding situations through group cooperation, so as to strengthen their understanding of what they have learned. In the research of project-based curriculum implementation, many factors and variables are involved, among which the study of learning mode has not been involved, but it is very important. Based on the implementation of project-based curriculum, this paper discusses the practice of promoting the implementation of project-based curriculum with evaluation reform, and takes this as an example to analyze the positive role of project teaching and examination evaluation reform in promoting students' learning participation, so as to provide some reference for further improving the effect of practical teaching and improving students' learning participation and learning effectiveness.

## 1. Introduction

Project-based curriculum has completed the research of concept and theoretical system, formed a perfect curriculum development technology and developed into a large scale. However, teachers always seem to be in a dilemma from concept to behavior in evaluation reform: on the one hand, they are full of expectations for evaluation reform and actively seek change in implementation; On the other hand, it seems that they are afraid of the evaluation reform and hesitate to implement it [1]. The implementation of the project-based curriculum evaluation reform calls for new teaching behaviors. In university curriculum teaching, the initiative and enthusiasm of students have always been a difficult problem for teachers and teaching administrators. What is involved behind this is the problem of students' learning participation. In the research of project-based curriculum implementation, many factors and variables are involved, among which the study of learning mode has not been involved, but it is very important [2-3]. Based on the implementation of project-based curriculum, this paper discusses the practice of promoting project-based curriculum implementation through evaluation reform.

# 2. Project Teaching

Project-based teaching, generally speaking, is a teaching activity that teachers and students cultivate the ability of various professional posts by jointly implementing a complete project work [4]. Projects generally come from engineering practice, which can be specific engineering projects or production projects, simulated projects, or projects with actual combat nature, and are characterized by practicality, comprehensiveness and innovation. In the teaching process, teachers take projects as the key link, guide students to analyze and design, and organize discrete knowledge points and operation techniques into a plane. Students learn all knowledge points through projects, and use them comprehensively, and establish a systematic and systematic concept, so as to raise knowledge from perceptual knowledge to rational knowledge, so as to improve learning interest and enhance learning enthusiasm, initiative and teamwork spirit. And through the practice of specific projects, we can achieve various abilities of professional posts.

Schools should fully integrate the teaching process with project engineering, construct a curriculum system around the needs of project engineering, and organize the implementation of teaching. This will help to aim at the post setting courses, cultivate abilities and improve the pertinence and effectiveness of teaching. Integrating professional education into the industry background is conducive to the connection between school professional education and market industry operation, to the realization of "zero-distance" contact between students and industry and society, and to the true realization of the educational concept that vocational and technical education is demand-oriented, employment-oriented and combined with Industry-University-Research [5]. This teaching form involves less difficult system theory and is more suitable for students in higher vocational colleges with poor foundation. In addition, its achievements are often encountered in daily life and study, and students are more interested, so it is easier to establish students' sense of accomplishment.

# 3. Principles of Project-Based Curriculum Implementation

# 3.1 Domain Knowledge is the Necessary Foundation

Project-based learning is a student-centered learning activity based on subject concepts and principles. Students participate in real activities, explore complex and real problems, collect information, investigate, study and cooperate, and finally form products or solve problems, thus constructing knowledge learning activities, and can apply what they have learned in real life. The design of project-based learning is based on students' original knowledge and experience, and conforms to the cognitive law, so that students can successfully accept the project-based learning process, and in the process of project promotion, new discoveries and new thoughts are constantly made, so as to acquire new knowledge, solve real problems and cultivate core literacy on the basis of original knowledge [6-7].

Students solve problems in corresponding situations through group cooperation, so as to strengthen their understanding of what they have learned. The thinking mode of applying interdisciplinary knowledge is conducive to the progress of students' cognitive ability. Because project-based learning involves the solution strategy of complex problems, it is difficult to meet the needs by using single subject knowledge. Therefore, before project-based learning, students must be provided with interdisciplinary knowledge so that they can solve problems better.

# 3.2 Student-Centered Principle

In traditional teaching, students only exist as passive receivers and stores of knowledge, and

teachers play a leading role, and he dominates everything in the classroom. The ultimate goal of learning is to pass all kinds of exams and evaluations smoothly. The teaching content of project teaching pays attention to both direct experience and indirect experience. The purpose is to introduce practice into project activities, so that students can master knowledge and skills through practice. Therefore, in project teaching, students are the main body of learning, and the ultimate goal of learning is not the test scores, but the improvement of various abilities.

# 3.3 Carefully Design the Task

Teachers should help students understand the basic requirements of each link and the key and difficult points of the entire process during the process of completing tasks. Consolidate the theoretical knowledge learned in practical operations, and through comprehensive learning, ultimately achieve mastery of the knowledge. Finally, through the design and implementation of tasks, students can gain a successful experience and cultivate their ability to analyze and solve problems. At present, learning interest is the first factor that affects students' learning in secondary vocational schools. Whether students can actively participate and cooperate and whether their enthusiasm and enthusiasm for participation can be mobilized plays a vital role in the success of the whole teaching.

# 4. The Process of Project-Based Curriculum Implementation

## 4.1 Develop a Curriculum System

In the view of core literacy, "knowledge" is not limited to memorizing, reciting and taking exams, but has moved towards "high-order" application. The school combines the current national curriculum standards with school-based reality, reconstructs the classroom with "project inquiry" as the core from the perspective of students, and gradually forms a complete curriculum system with three axes of "curriculum standard guidance", "subject integration" and "class hour integration". The formulation of its teaching objectives should consider two links. One is the formation of professional post ability. Second, while learning new knowledge and skills, realize the integration of old and new knowledge [9]. In order to enable students to better acquire knowledge and skills, and understand the actual work process, teachers should try to simulate real experimental scenarios and learning environments.

The learning environment of project-based courses is not a traditional classroom or a training classroom, but a clever integration of the two. The author thinks that this combination should take the training classroom as the main body and add some traditional classroom teaching elements, such as small blackboard and multimedia. Project-based curriculum advocates the integration of theory and practice, integrates theoretical knowledge and practical knowledge into the project, and requires the environment under the project-based curriculum learning mode to integrate theory and practice.

# **4.2 Selection and Determination of Teaching Strategies**

Teaching strategy is the overall consideration of the procedures, methods, forms and media of teaching activities to achieve specific goals [10]. The choice of teaching strategies directly affects students' learning effect, and the key to determining the quality of teaching strategies lies in the choice of teaching methods. Teaching theory holds that teachers should choose teaching methods according to three aspects, namely, teaching objectives and tasks, teaching content characteristics and students' actual situation.

Through participatory teaching, students' main role is fully displayed, and teachers, as organizers,

collaborators and participants of teaching, inspire, induce, adjust and motivate students' participation. Obviously, in essence, it belongs to the student-oriented education system. However, because classroom participation can obviously improve the teaching effect and save a lot of homework time for self-learning new content, the whole process of "participatory teaching" is a benign cycle in which the waves behind push the waves before, and the key point is the front of the learning center of gravity.

# **4.3 Implementation of Teaching Process**

In the implementation of project teaching, she will meet a confused and contradictory classmate, who doesn't know what she should do. Some students choose to sleep, play mobile phones, etc. instead of participating in group activities, even from the first class. This is something that makes us all very headache and worried. To carry out project-based learning based on real situations, students should first abstract and simplify real problems into chemical problems, that is, extract effective information and integrate them, and then abstract them chemically, so as to develop their understanding and discrimination ability in the process.

In the process of implementing project-based teaching, the project is a project that integrates teaching theory and teaching content, and its operation process is project selection-product definition-project research and development-project acceptance. The project presented here must be carefully designed to cover a wide range of knowledge in the implementation process, so that the curriculum knowledge can be organically connected through the project. Teachers teach with the working process as the guide, and expand the knowledge points in the process of project implementation into knowledge modules. And for the knowledge module, supplemented by small projects, in order to realize the transfer of students' knowledge to skills, and provide conditions for students to design and make their own projects. The teaching process is shown in Figure 1 below:

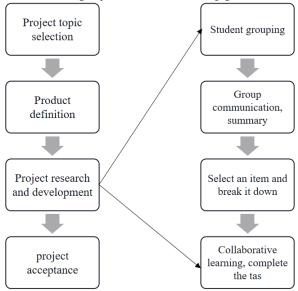


Figure 1: The Process of Project Teaching Implementation

The good start of the implementation of project teaching method is the choice of teaching projects. The selection of the project should consider the theme of the project task, the content and elements of the project task, the title of the project task and other factors. In a broad sense, project evaluation should be implied in the whole project implementation process, but its evaluation purpose and emphasis are different. The summary and evaluation after the completion of the whole project should be a process of summary, feedback and reorganization.

#### 4.4 Examination and Evaluation

The cultivation of students' practical ability is listed as the main aspect of assessment, and the relevant knowledge points of the project are assessed at the same time. Teachers can evaluate the project according to students' learning, work attitude, spirit of unity and cooperation, attendance, dedication and professional ethics, etc., combined with all aspects of the project. In the learning process of project-based courses, teachers should evaluate students in the following aspects:

Learning attitude. Learning attitude determines the learning effect to some extent. Teachers should be aware of the positive attitude of students and use evaluation methods to motivate students to correct their learning attitude.

The quality of the final products and services is the yardstick of practical ability, which is equivalent to professional ability at work. This is very important. Teachers should instill in students the importance of the final product (or service). The final evaluation index is the product or service.

# 5. Problems Needing Attention in the Implementation of Project-Based Curriculum

Project teaching can break the original teaching mode of basic computer application courses, enable students to grasp and apply the teaching content as a whole, fully mobilize students' learning enthusiasm, enhance students' learning motivation, and also provide a good platform and opportunity for students' high-level thinking. The strategies and methods of project implementation are also freely formulated by students, who really become the main body of learning, thus fully stimulating students' interest in learning and allowing students to actively participate in the learning process. Give timely praise and encouragement after the task is completed, and they will learn more actively and actively after they have a sense of accomplishment.

Any teaching method has its advantages and disadvantages, and the project-based teaching method is no exception. In the project guidance stage, the class hours are relatively small, and the traditional teaching method is mainly based on teachers and supplemented by students' listening. To fully reflect the dominant position of teachers, students mainly understand the steps to solve problems and need to learn what knowledge. Before a project is completed, some students begin to ask the teacher what project we will do next time, showing strong enthusiasm. Project-based teaching method pays attention to students' active participation, which requires students to have strong self-study ability and unity and cooperation ability. If the students' ability in these two aspects is slightly weak, it will lead to the project not progressing smoothly, and even lead to the students' learning progress falling behind and unable to keep up with the overall class rhythm.

### 6. Conclusions

The implementation of the project-based curriculum evaluation reform calls for new teaching behaviors. In university curriculum teaching, the initiative and enthusiasm of students have always been a difficult problem for teachers and teaching administrators. What is involved behind this is the problem of students' learning participation. This will help to aim at the post setting courses, cultivate abilities and improve the pertinence and effectiveness of teaching. Through the project-based teaching, combined with the training project to carry out the reform of examination evaluation, the project training and examination evaluation reform complement each other and promote each other, which improves the enthusiasm and initiative of students from the source. Project-based teaching method pays attention to students' active participation, which requires students to have strong self-study ability and unity and cooperation ability. If the students' ability in these two aspects is slightly weak, the project will not progress smoothly.

# Acknowledgement

The authors acknowledge the Chongqing Higher Vocational Education Teaching reform research project(203725); Chongqing Jianzhu College Teaching reform research project: "Research on the Practice and Countermeasures of Integrating Innovation and Entrepreneurship Education with Professional Education in Higher Vocational Colleges: Taking Chongqing Vocational College of Architecture and Engineering as an Example" (22JY04).

#### **References**

- [1] Dong Hongxue, Chu Shenghua, Zhang Kunyuan. Research on the project-based teaching mode of flip classroom based on MTI's professional translation ability training. Foreign Language Audio-visual Teaching, vol. 2017, no. 4, pp. 7, 2017.
- [2] Nie Jingjing. Project-based teaching mode to enhance the teaching effect-"Commercial Space Design" course as an example. China university teaching, vol. 2017, no. 8, pp. 3, 2017.
- [3] Zhang Zhinan, Chen Juebei, Zhu Jiabin, et al. The application of reverse instructional design method in project-based teaching-taking "Introduction to Engineering" of Shanghai Jiaotong University as an example. Higher Engineering Education Research, vol. 2018, no. 6, pp. 5, 2018.
- [4] Zhu Jiabin, Zhang Guoyang, Liu Qunqun, et al. Practice and Enlightenment of Project-based Teaching in Delft University of Technology. Higher Engineering Education Research, vol. 2019, no. 3, pp. 6, 2019.
- [5] Wang Rulin, Wang Jinrong, Liu Zixuan. The application of student-centered project-based teaching in Surgical Nursing. China General Medicine, vol. 2018, no. 1, pp. 3, 2018.
- [6] Zhou Mengfei, Cai Yijun, Liu Huayan, et al. Exploration and practice of project-based teaching mode based on competition. Control Engineering, vol. 27, no. 4, pp. 4, 2020.
- [7] Zheng Feng. Design professional "double-innovation project teaching" course practice teaching mode and evaluation mechanism construction scheme. Fujian Tea, vol. 42, no. 3, pp. 1, 2020.
- [8] Yang Bo, Geng Yang. Exploration on the training mode of applied talents of cultural industry management based on project-based teaching. Meiyuan, vol. 2020, no. 004, pp. 110-111, 2020.
- [9] Zhang Zhinan, Zhang Guoyang, Han Dong, et al. Project-based teaching management based on knowledge maptaking innovative practice projects of college students as an example. Higher Engineering Education Research, vol. 2022, no. 2, pp. 5, 2022.
- [10] Song Kun. Optimized design and practical exploration of project-based teaching -- Comment on Geology of Oil and Gas Field Development. Contemporary Education Science, vol. 2016, no. 17, pp. 2, 2016.