

Research on the Teaching Mode of "Project-led and Work-combined" in the Course of Internet of Things Communication Technology

Shenju Liu

Shenyang Institute of Technology, Fushun 113122, China

Abstract

In view of the current situation of applied undergraduate teaching, this paper analyzes the research significance of the teaching mode of "Project-led, work-study combination". This paper introduces the application prospect of the project, and expounds the goal, content and expected results of the teaching reform. On the basis of project teaching, this teaching reform plans to study the teaching mode of "project leading, combination of work and study" and put it into practice in this course. Through the reform of teaching methods, further cultivate students' ability to use knowledge, practical work ability and innovation ability, and cultivate highly skilled professional workers in line with the development needs of enterprises.

Keywords

The Teaching Reform; Project Teaching; Work-integrated Learning.

1. Project Research Significance

The teaching reform of this course plans to study the teaching mode of "Project-led, Work-combined" in the course of Internet of Things communication technology. "Work-study" refers to the combination of the working process and the learning process of the relevant position. Through the teaching reform of this course, the teaching objectives are determined based on the professional ability and comprehensive quality required by the post, the course content is designed based on the enterprise project, and the teaching process is designed based on the working process. Teachers and students play the role of job personnel, with students as the main body to complete a complete task implementation process, the knowledge, skills and skills into the specific work situation, so that students can experience the learning and creation process in the form of obtaining direct experience. Emphasis should be placed on cultivating students' ability to transform knowledge into application and solve problems so as to cultivate highly skilled professional workers in line with the development needs of enterprises.

Internet of Things communication technology is the product of the close combination of modern communication technology and computer technology. This course is a professional course for Internet of Things engineering major and also a main course. Through the study of this course, students are gradually trained to study and analyze various theoretical knowledge in the Internet of Things communication technology, so that they can master its basic principles and systematic analysis methods, and lay a foundation for the future research, design and production of the Internet of things, so that they can independently complete the design of short-distance wireless communication system. Based on the above teaching objectives, students are required to have stronger hands-on ability and the ability to participate in practical work. This course now adopts project teaching mode of teaching, are now in the teaching on the basis of the project, the "project lead, Work-integrated learning" teaching model, and carries on the practice in this course, by the way of teaching reform, further trains the

student to use knowledge ability, actual work ability and innovation ability, improve the teaching effect.

2. Project Application Prospect

(1) For a single course, the traditional course content, teaching mode and assessment system can be changed to build a vocational competency-based course teaching mode.

(2) For students, it can enhance their sense of teamwork, stimulate their creativity, realize their independent learning, give them a sense of achievement in the completion of project tasks, and lay a good foundation for the smooth employment.

(3) for applied undergraduate colleges and universities, for the pilot in the reform of this course, a wide range of application of this teaching mode can effectively promote the realization of university-enterprise cooperation and Work-integrated learning mode, narrowing the gap between the demand with the enterprise, the development of our school become unique applied undergraduate colleges and universities is of great significance.

3. Research Status at Home and Abroad

3.1. Foreign

In foreign countries, developed countries have a lot of experience in training applied talents and have formed a relatively mature curriculum model. In the field of applied talents education abroad, the curriculum model starting from job analysis and task analysis is mainly advocated, such as the dual system model in Germany, the CBE model in Canada and the United States, and the MES model of the International Labor Organization. These modes have gradually developed in combination with the economic and social development of their respective countries and formed their own characteristics.

3.2. The Domestic

"Work process-oriented" was introduced into Our country at the beginning of this century, and the concept has not yet formed a systematic system, but its core ideas have been applied in the field of vocational education in China, especially in the field of vocational education curriculum. As is known to all, professor jiang and source is the representative figure of the working process of the concept in our country, and he's on the working process of the systematic theoretical basis of curriculum structure, according to the German "learning field" curriculum, namely "working process oriented" theory of curriculum reform, the working process of the systematic course explores the curriculum structure related theory in two forms: The linear structure and concentric circle structure are explained and analyzed. Professor Jiang's theoretical system provides a good reference for the development of a systematic curriculum of "work process" in China.

It is of great significance to learn from the development of work process-oriented education model at home and abroad.

4. Teaching Reform Program

4.1. The Reform Target

The goal of this teaching change is to improve the cultivation of students' professional ability, including method ability, professional ability and social ability, through the implementation of the work process of the enterprise project, so as to cultivate students' key ability of sustainable development. It attaches great importance to knowledge processing and transformation, focuses on work tasks, focuses on the ability to solve problems, and emphasizes the quality

education of students' innovation ability, professional accomplishment, service consciousness and professional ethics.

4.2. Reform of the Content

4.2.1. Contextualization of Course Project Work

The curriculum reform focuses on how to present the typical situation that students must experience in the future through the implementation process of the curriculum project, create an independent and cooperative learning environment, and stimulate the enthusiasm of students to participate in the curriculum project learning. The knowledge and skills acquired by students in the situation should reflect the methods that these knowledge and skills are applied in real life work, which is more conducive to helping students apply knowledge to the problem solving process in real life work.

4.2.2. Teaching Staff to Work

The curriculum reform should complete the role play of teachers and students in the actual working situation. Teachers should play the role of "project manager" or "consultant" in the working situation, responsible for assigning tasks and supervising construction, while students should play the role of project team members, responsible for the division of labor and cooperation to complete tasks. The situational role playing of the job can make students more able to experience and understand the learning content and the requirements of the learning subject, and cultivate students' ability to work independently through competition and cooperation.

4.2.3. The Teaching Process is Proceduralized

In this curriculum reform, the design of teaching activities is oriented by the work process, and the six implementation steps of the work process are taken as the main activities of students in the process of project implementation, so as to construct a design method of project curriculum learning activities oriented by the work process. Each sub-project work situation can complete a complete work process through the six steps of information, planning, decision-making, implementation, inspection and evaluation, so as to achieve the integration of theoretical knowledge and skill knowledge, learning situation and working situation, so that students can get a complete training of thinking ability.

4.2.4. Evaluation of Course Assessment

Instead of the traditional course assessment process, the job evaluation system is used to measure, measure and give value judgment according to students' implementation process, implementation results and summary of task indicators in specific working situations of the project. To working process oriented project in the process of curriculum evaluation should be based on students' learning achievements in formative assessment, pay attention to each student participation in the project tasks to carry out, and innovation and practical ability, etc., to maintain the enthusiasm of students learning, students are encouraged to actively participate in, innovation and practice.

4.3. Key Issues to be Solved

- (1) Revise the syllabus of Internet of Things communication technology course according to the job needs and ability training objectives of enterprises.
- (2) Formulate a teaching plan in line with this teaching reform.
- (3) The original project teaching version of the Internet of Things communication technology textbook is no longer applicable, should be revised or re-published according to the new teaching mode of "Project-led, combination of work and study".

(4) Improve the course evaluation system, carry out comprehensive evaluation on each link of students' learning, and encourage students' enthusiasm and creativity as far as possible on the basis of maintaining the principle of fairness.

5. Summary

This topic is to study the teaching mode of "Project-led, combination of work and study". Based on the enterprise project, it gradually develops according to the work process, constructs the vocational working situation, and promotes the development of students' comprehensive vocational ability.

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