

The Application of "Project-based Learning" in Higher Vocational Computer Courses

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Keywords: Project-based Learning, Higher Vocational Computer Courses, Application

Abstract. With the continuous advancement of technology, computer technology has infiltrated human life and work and it has become a necessary technology for human. In this case, the computer program has become a required course. After research and analysis, this paper thinks that if the "Project-based Learning" be applied to the higher vocational computer courses, it will contribute to the development of higher vocational computer education. This paper mainly describes the "Project-based Learning" and its application in higher vocational computer course.

Introduction

It has a deeper origin between Project-based Learning and vocational education. Project-based Learning originated in 16th-century Europe vocational education building schools. Project-based Learning takes the practical project as the object, at first the teachers make the decomposition of the project and then make the appropriate demonstration of it, followed by the students grouped around their projects for discussion, collaborative learning, and finally to the case of completed projects to evaluate whether students achieve teaching purposes. Teaching project requires the project to real social or business as a carrier, under the guidance of a teacher or expert, independent learning by students to complete the work in a real environment, planned projects, implementation, monitoring, and evaluation summary, students theoretical knowledge, practical skills, practical work, engineering practice ability, comprehensive professional competence [1].

Project-based Learning break the traditional teaching model, the traditional classroom "to teachers, textbooks, classroom-centered" to "student, project, experiment and training base for the center" to achieve the integration of theory and practice, can be very good between the school and used to establish an almost "zero distance" platform and channel. Project-based Learning to really "teaching, learning, doing" integration, especially for vocational and technical education, vocational education in practice, almost all products and services can be viewed as a project. Design some can carry teaching knowledge points, with specific "work situation", integrated use of knowledge project in vocational computer courses is very easy to operate and achieve and it can also enhance the effect of vocational computer courses teaching and the core professional ability of students.

Computer Courses in Vocational Schools

Higher vocational computer education as a popular professional education, the main culture rich theoretical knowledge and practical ability, skilled use of computer software, flexible development of practical software, skilled computer assembly and maintenance, network formation and maintenance, web design and development, as well as low level of comprehensive computer training technical personnel. Higher vocational computer education includes computer software technology, animation design and production, computer network technology, computer technology, mobile communication technology several professional. Computer Courses Vocational Colleges refers to all the curricula of all computer science majors offered, including basic courses, core courses, professional development courses and so on [2].

Project-based Learning

Project-based Learning is also known as case studies, project-driven teaching method and project-oriented pedagogy. Blumenfeld and several other scholars in 1991 defined the project method as an open learning strategy. On the 1999 PBL handbook prepared for teacher pedagogy and other custom project Thomas is a project-centered learning model. Project-based Learning in the end what is the key to see the specific application in which the field of education, which perspective and how to implement. Project teaching the tradition of constructivism, humanism, pragmatism educational thought, is a breakthrough new educational concept of traditional teaching methods cramming for postgraduate education, different higher education, vocational education, primary and secondary education even in kindergarten education levels of education. Project-based Learning can be defined either as an educational concept, a teaching mode, a teaching method, a teaching strategy, but also can be defined as a learning philosophy, a learning mode, a learning method, a learning strategy.

The new three centers of Project-based Learning are "student-centered (the subject), take practice and explore as the center, take project activities as the center." Project-based Learning is strongly practical and requires students to research project title, production project, with a variety of resources to carry out inquiry-based learning, problem-solving, to complete the project, and reflection and evaluation of their work. During the completion of the project in the active construction of knowledge, access to appropriate knowledge, skills and practical experience, students of all abilities, so that knowledge into skills.

The Features of Project-based Learning in Vocational Education

Vocational Education Project-based Learning refers to the guidance of teachers help students create a complete practical projects in the form of individual or group carried out a series of educational activities. Students apply the knowledge in specific work situations handmade design products to solve practical problems. Vocational education programs may be the design and production of a product, write a program and create a website, to exclude a failure to provide a service, to solve a problem. Vocational education in the Project-based Learning has the following characteristics [3]:

The teachers become organizers, project supervisor and coordinator. In high school students are the subject of pedagogy, teacher has change from dominant role to the dominant position, the teachers from the stage to behind the scenes, teachers put forward higher requirements, but also increased the teachers' strength work. In project selection requires teachers to have more creative thinking and practical experience in project implementation and the results show the evaluation stage requires teachers to have a good organization, communication and coordination.

Take the project as a carrier to carry out teaching activities and the ultimate goal is to train students 'comprehensive ability. The project teaching profession is not isolated from the whole school teaching profession or teaching activities, through the completion of the project to enhance students' employability and competitiveness, sustainable development and comprehensive vocational ability is the ultimate goal of the project teaching. Teachers should fully all aspects of thinking, so that the project pedagogy have clearer objectives orientation, to avoid "teaching for the project and the project teaching" bad situation, although the entire process of teaching and to expand all around to complete the project, but the project only complete teaching objectives carrier, is not the ultimate goal, the ultimate goal is to develop students' overall professional competence.

By creating a real or simulated situation to train students' professional competence. The vocational education occupational standard concept of learning the position must be decided based training places to the real task of the internal structure of a course structure. According to vocational students in the future computer future career orientation, according to the student's future career tasks applied to the content to carry out the Project-based Learning, to build a professional ability to promote students' real or simulated learning positions, so that students in real-life situations Stimulating motivation. In the context of the background work according to job requirements, work

process as the basis for the project as the main body, to strengthen students' professional capacity. Simple task-driven and case law is difficult to enhance students' professional competence [4].

The need for a comprehensive multi-disciplinary knowledge and skills to complete the project. Project course needs to rely on a certain course support, some project tasks within a course built, the general on the end of the course as a follow-up to extend the activities of the program, a better understanding of the course content, to apply their knowledge of the purpose. Most of the projects to be integrated into the teaching method to carry out a comprehensive curriculum, project task requires a series of courses leading support, which requires the integrated use of multi-disciplinary knowledge and skills, the creation of the work environment to the project as a carrier, connecting knowledge and tasks, knowledge and skills reintegration and Construction.

The implementation of the project is in the form of individual or group of students. completed independently by the students are responsible for their own completion of the project, to individual or small groups, depending on the size and complexity of the project to develop the project plan their own projects, the implementation of projects, and actively carry out the project explore, and ultimately handed over the work to complete the project. Students in the course of the completion of the project cultivate students' ability to solve problems independently and their skills of cooperation, communication and coordination.

The Application of Project-based Learning in Higher Vocational Computer Course

Theory course. Theory course is the basis of all practice, practice mentor, so how to teach it is essential. The theoretical teaching project teaching method used in vocational computer, teachers can systematic way of teaching the basic concepts of computer theory, the program code, frame structure presented to students. Students and teachers can preach to the classic is tinted to practice the way, and to explain the order may be this: the knowledge review, theoretical knowledge and theory to explain the case, students imitate summarized. In the course of the lecture, the teacher should focus on knowledge of the difficulties carefully as well as problems students often meet with in order to ensure the effectiveness of teaching throughout the missionary process.

Practice class. Practical action is the best way to consolidate the theoretical knowledge, but also a way to best reflect the vocational teaching purposes. The practice lesson of computer course is lesson to consolidate the theoretical concepts, main course knowledge. The real purpose of the machine class that is to allow students theoretical knowledge in the classroom itself learned into practice, so that the knowledge is more consolidated. Project-based Learning on the machine in order to explain the lesson is this: Knowledge review of practical cases to explain, to enable students to real practice, summarize the teaching process and students assignments. Project-based Learning Based on the machine class before the real practice, teaching students to analyze real need to practice cases, and remind students where difficulty.

Project lesson. The so-called phase of the project department mean, when students after completion of the contents of chapters, teachers will be integrated into a content section phase of the project lesson. The main content of this phase of the project is to make the case, and to practice the way classic is tinted, which explain the order is this: knowledge review and analysis of relevant cases, allow students to operate, course summary, assignments. In the project implementation process, teachers should be a statement about the project to the students to display their difficulties often encountered,, explaining the student's question about the specific steps to introduce students to the project and, finally, to give students hands-on review and evaluation.

Integrated projects section. In order to consolidate the knowledge students have learned, after the completion of the relevant course content, teachers should give students with a number of integrated projects strong lesson. These projects have the following characteristics: comprehensive, innovative and strong, with the main case. The project in the course of implementation, the main use is classic is tinted practicing manner. In the teaching process, the order of teaching is as follows: knowledge review, study cases, the student real practice and summary [5].

Contest graduation class. Vocational students in the fifth semester of graduate design project task is to branch, in this project lesson, students can accumulate relevant project experiences and this project is divided into hard and soft projects project. In the project method, the graduation project design adopted teaching approach is the way to do classic is tinted. The order in which teaching is: Knowledge review, analyze needs, analyze the feature set of knowledge points to explain, to help students develop plans to enable students to implement their own plans, evaluation and summary. Software projects in the classification for the management classes and web applications, multimedia production class, and so on. These projects are not the same concerns. Graduation project management classes designed to be a programming language to implement the interface management system. These types of systems are hospital charges system, library management systems. Students at the completion of this task, we should learn from some of the design ideas, design solutions and design information and other mature products. Graduate Design Project class network design application mainly in the LAN as the implementation of the platform, on the web pages related to the energy released software. The graduation project content like multimedia production is the production of advertising films and courseware, its production process is the use of multimedia technology.

Conclusion

Computer course more focused on practice, so is very wise to use the "Project-based Learning" use in computer courses teaching. It can not only meet higher vocational colleges teaching philosophy, but also can make students become the center of the teaching process, and make them learn more knowledge in the process.

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