

Research on the Application of Pbl Teaching Mode in Educational Technology Practice Course

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Abstract: on the theoretical level, this paper constructs the pbl teaching model of the practical course of educational technology. On the practical level, the pbl network teaching platform is constructed, and the teaching practice is carried out. The research shows that the pbl teaching model is suitable for the practical teaching of educational technology specialty, which can effectively improve the comprehensive ability of students, and cultivate students' practical ability, interpersonal skills, evaluation ability, emotion, attitude and values.

1. Introduction

Creative education is developed on the basis of "accepting education" with the aim of inheritance and development. The basic value orientation of education is to train talents with creative ability. Has been generally recognized in the innovation in higher education practice concept, because it is based on higher education china is the main teaching method to "teach", to overcome the problems of higher education and the unity of the responsibility of the times of innovation education has drawbacks, according to the teaching practice point of view; it is changing the traditional mode of education "for the purpose, committed to the development of education development function, to cater to the trend of education reform and development in the worldwide in the early twenty-first century; and human relations, education, social three dialectical as the starting point, emphasizes the promotion play essential strength of innovation education, revealed in the" innovative education of national rejuvenation the mission of the times to cultivate innovative talents ".

The project of innovation education in Shandong province through innovative education mode of the four classroom teaching a lot of practice in the basic characteristics of autonomous learning teaching mode; the basic characteristics of the inquiry teaching model; basic characteristics of situational experience teaching mode; basic characteristics of practice teaching mode. The application of four teaching modes in educational practice and the emergence of a large number of teaching modes make the innovative education concept closely integrate with the teaching practice.

The characteristics of classroom teaching evaluation of innovative education includes four points: one is to improve the teaching process and pay attention to the core regulation of classroom teaching behavior of the target; two is the emphasis on self evaluation; three is to cultivate students' personality spirit; four emphasize the qualitative evaluation and quantitative evaluation. They have diversified subjects and diversified evaluation methods for the evaluation of basic education. The innovation of classroom teaching evaluation index system and the construction of three districts: the basic quality of innovation consciousness and innovation ability, the independent innovation learning ability of students. Classroom teaching from the basic, open, subjectivity, differences, five aspects of classroom teaching evaluation, teaching practice conducted good guidance and operation.

2. Helpful Hints Research on Pbl Teaching Mode in Foreign Countries

2.1 Multiple Interactive Subject

In the United States, the project teaching method is widely used in the teaching practice of the

MBA Education (MBA). Silicon Valley software engineering education in the United States by “theory + practice + practical” three stage progressive strengthening teaching mode. In the United States, many of the primary school curriculum teaching, students need to combine the teaching content, the sub group to bear one or two small research projects. Students apply the theoretical knowledge of learning to solve the problems in the real life, and the practical skills are improved. In India, training institutions mainly through specific project practice to develop “software blue collar”. The reason is that the Indian software market, more emphasis is “hands on”, rather than to master computer theory, computer science research. France, Finland, Sweden, Denmark, Norway, Britain, Switzerland and other countries in a variety of teaching and also a large number of application of the project teaching method. Based on literature and Internet research found that foreign wealth of PBL research results and theory has been basically mature, mainly embodied in the study of students' attitude of study, student performance, and metacognitive skill acquisition and the use of research, as well as the impact effects of PBL factors research in four areas. With the development of network technology development and application of the teaching, PBL online has gradually become a hot research, mainly concentrated in the CPBL (based on PBL collaborative learning) research and online PBL design transmission, and most of them are still in the theoretical study and experimental stage.

Among them, in the curriculum structure of primary and secondary schools, Taiwan, Hongkong, has added a similar project teaching courses. Beginning in 1990s, the new curriculum system, “the spirit of the initiative to explore and study the spirit of” and “training independent thinking and problem-solving skills” in Taiwan, China to implement. In Taiwan, “project teaching” is called “project teaching”, while in Hongkong, it is called “planning education” “. In the eighties of the 20th century, Shanghai part of the school in the domestic first experimental research of innovation education, emphasizes the cultivation of divergent thinking, stressed the need to contact the actual life, pay attention to the cultivation of comprehensive ability of the characteristics and the experiment in many ways and project teaching were similar. In the 90s of the 20th century, with German education international cooperation, carried out in Suzhou Institute of education of Junior High School of labor and technology teacher training project of curriculum and teaching experiments, obtain the ideal effect, then project teaching and comprehensive promotion in the stage of compulsory education in Jiangsu Province labor and technology curriculum reform. Many schools of higher education of professors and scholars, combined with practical teaching reform of colleges and universities, to the project teaching were widely, meticulous scientific research, made the final significant results and this teaching mode can be used in undergraduate course teaching practice [1].

2.2 Multi Intelligence Evaluation System

From a neurological point of view, it is not possible to design a single intelligent evaluation task. The human brain does not connect in a single intelligent way. Should try to collect a variety of intelligence into the project task, because in any one of our tasks, all intelligent people are in a relatively harmonious way to work together. Anyway, in the evaluation of project teaching process, not only to knowledge of students of the master, classroom performance evaluation, should also give students a chance to explain and expound and prove or defend their outcomes (including their works). In this way, the teaching work can be improved in the evaluation, the comprehensive quality of the students can be effectively developed in the evaluation. Student's individual differences, with the cognitive ability and experience of the background is not the same. In the PBL classroom teaching, teachers and students are rich in resources and information, there is a multi-dimensional interactive content. From the perspective of teaching content, there is a multi-dimensional interaction between teachers and students. This multidimensional interaction includes both knowledge and skills, but also includes the emotional, attitude, and practical aspects of the exchange. The reality of the problem is complex, which requires the students to construct their own integrated cognitive system. For a long time, we in the actual teaching pays more attention to is often the mastery of curriculum knowledge, relatively, in the classroom in other intelligent

development space to some of the weak, which is not conducive to the students' creative ability and practical ability of the development. From the interactive content sources, PBL teaching has a wide range of information sources. This wealth of information both from the aspects of teachers and students, but also from the curriculum materials in the knowledge, as well as from the extra-curricular life experience, interest, etc.. This open, dynamic information source, the classroom this limited physical space into an ever expanding, unlimited resource space.

2.3 Organization and Implementation of Projects

After the first two stages of preparation, students should implement the project have relatively clear and complete understanding, next to formulated in accordance with the second phase of the project, under the guidance of teachers collected relevant information, reasonable analysis of relevant information, screening and application, specific level in the organization and implementation of the project learning: on the one hand, through the development of self-education students actually participate in project development process, through personal experience, master the knowledge and skills needed to complete the project, improve the ability of self learning and self management. On the other hand, through the mutual education between the students, to carry out group learning, through cooperation and communication, teamwork and communication skills training. In addition, the implementation of the process of checking and modification of the original project plan is an important part of this process. Through the organization and implementation of project teaching, students will be able to objectively evaluate their own learning, compared to find out the gap, and improve the existence of their own weaknesses identified in practice, to further enhance the professional skills and comprehensive quality. After the completion of the project works, the study group to carry out the report presentation, the results of the exchange. At the same time, in view of the content of the report and project works, the study group to carry out self-assessment and mutual evaluation, teachers and students to do research on the project summary and reflection. In the project evaluation process, the evaluation should be various, the multiple perspectives: from the point of view of the content of evaluation, in addition to the evaluation of basic knowledge and skills evaluation but also to meaning construction of multiple viewpoints and perspectives, both to include a summary evaluation, should also include formative evaluation; from the point of view of evaluation, the evaluation of the project should be including student self-assessment, peer assessment and between teachers and students of common evaluation. Finally, the teachers and students have to summarize and reflect on the problems and experience in the teaching process, in order to prepare for the next project [2].

3. Research on the Application of Pbl Teaching Mode in the Practice Teaching of Educational Technology Specialty

3.1 The Basic Characteristics of Pbl Teaching Model

The first study of the focus of research in the practice of educational technology research also began in 2004, the full description of the PBL in educational technology practice teaching has been concerned about the beginning. From 2004 to 2013 (2013 papers have not included completely, do not consider), the PBL research in educational technology, school teaching practice in the application of the number of papers, showed an increasing trend on the whole, but the growth is slow, that has been PBL teaching practice of educational technology in the research despite some achievements. However, the research literature quantity is not much remains to be further study [3]. From the content, the 31 related research literature on the application of PBL teaching model in the practice of educational technology research mainly reflected in the following aspects:

(1) The application of project management in the field of educational technology. Such as Yang Xiaojiang in the project management in our country in the field of educational technology applied research “, describes the project management plays an important role in the development of the discipline of educational technology, and analyzes the status of project management of educational technology in our country and further put forward the concept of” educational technology project

management and implementation of the principles and methods. Wutao in the discussion on Educational Technology in the field of project management, “a text from the perspective of project management, the problems existing in the field of China educational technology specialty practice teaching were discussed, that project management on the research and practice of educational technology development has important significance. Wang Xiaomei, Feng Yunzhi in the in-service teachers' educational technology ability training system construction from the view of project management, the management from the perspective of the project management theory is introduced into the training of teachers' educational technology ability and ability of educational technology project management process model as a guide were training program architecture, systematically explores the implementation process and method of the training of educational technology ability of project management.

(2) The application of project teaching in the practice teaching of educational technology. Such as Chun Yan Jia, Yu Zeng Zhao in the educational technology learn special skill curriculum project of teaching and research, with < video like > course cases “in educational technology learn professional skill curriculum training target as the foundation with photography video technology courses to carry out the project of teaching and on the curriculum project of teaching mode were studied. Zhangxueping in “,” project teaching “in < > experimental course of modern education technology in the teaching application,” a paper on the design of the experimental teaching of “modern educational technology” project were discussed, combined with examples, according to the teaching summarizes the actual implementation process of project teaching.

(3) The application of project in education and training and school based research. Such as Shu Sheng Shen in the teachers' educational technology ability training project design on to at the beginning of the teaching staff of educational technology ability of intermediate training teaching material construction for example “to training project analysis of scientific theory foundation as a starting point, on the training program design and influence factors of the teacher educational technology ability demand is analyzed. Then discuss the formation and development of the training project design thinking. At last, the author designs the implementation plan and the learning activities of the training program, and makes a reflection and evaluation on it. PBL in educational technology specialty practice teaching, although the application to a certain level, but in the actual teaching should be how to choose, design reasonable teaching project, how to ensure the effectiveness of the implementation of project teaching, the teaching effect how to make a scientific evaluation, the implementation of PBL teaching mode in the related theory basis, principle, process and organization, evaluation strategies need to be further research and discussion.

3.2 Dynamic Nature of Teaching Process

Project based learning (PBL) is a kind of open teaching form, concept on its definition, many scholars from different angles been introduced: the American Robin Fogarty thought, from the point of view of learning, project based learning is learning the true, its essence is dynamic, the most significant feature is practice, mainly around the project design, execution and completion of the works and other activities of. Project learning encourages diligence [4], cooperation and creativity, and through the submission of the final product, the integration of the experience of learning. The German Rudolf - Prussian Infill and China's Xiao Fang Fu believes that the project based learning is refers to under the guidance of teachers, students in specific collective learning (project team), according to the interest in study and life experience put forward question or activity of desire (creative project), the feasibility of make decision on whether the project), and around established goals (project outcomes) decided to learn content learning style, self planning, implementation and evaluation of the learning activities in the teaching activities. Through the analysis on the above definition shows, key points of PBL in the teaching process, more attention have autonomous learning, cooperative learning, learning plan, problem solving process and the real social situation such as, and emphasize the cultivation of students' research ability and practice ability of learning. The author thinks that the PBL teaching mode is that focus on the basic concept and principle of subject curriculum, to production and development work for the purpose, in the real life application

of rich information resources to carry out inquiry learning activities [5], and within the specified time completed a series of complex problems in teaching, a research of learning mode. The model aims to convert the “Teacher centered”, “textbook centered” and “classroom centered” to “student centered”, “student centered”, “experience centered” and “activity centered” “. PBL teaching mode embodies the new curriculum idea in the teaching goal, curriculum advocated to overcome the tendency of too much emphasis on imparting knowledge, emphasizing the formation of active learning attitude, stressed the need to focus on the cultivation of students' innovative spirit and practice ability; in the process of teaching, teachers and students pay more attention to the interaction between attention, democratic and harmonious relationship between teachers and students; in the ways of learning, change the emphasis teaching too much emphasis on the status of passive learning, mechanical memorization and mechanical training, encourage students to actively participate in activities, to explore and practice operation ability, cultivating students' information literacy, knowledge construction ability, ability to analyze and solve problems and communicate in the evaluation mode; to build the evaluation system, pay attention to the all-round development of students[6].

3.3 Teaching and Learning is an Interactive Process

Problem based learning (PBL) from the selection and identification of the project and to the implementation of the project, to complete the evaluation of the project process is learning in under the guidance of teachers to complete a situated learning process, teachers and learners to in-depth study of all aspects of the project, discuss how to choose and design the project, reasonable grouping and division of labor, making project plan, resource acquisition project, making project work, project work and project works exchange and evaluation show. Each learner to the original cognitive level as the foundation, through the implementation of the project completed sense making and application of knowledge, combining theory with practice, to deepen the understanding and mastering of knowledge[7], at the same time in the communication and cooperation with the teachers and students learning process improve their comprehensive ability. The teaching model mainly includes the following three basic characteristics:

In the project teaching, the teaching process is composed of the dynamic process of teaching and learning, which is the process of interaction between teachers and students and the development of each other. Therefore, the dynamic nature of the teaching process has become one of the characteristics of the PBL teaching model. The dynamic performance of this kind of teaching process is mainly:

(1) Teaching and learning is a process of harmonization and unification. In project teaching, teaching and learning is a dialectical and harmonious unity, which is not only the process of teachers' professional development, but also the process of students' all-round development. For the teachers, the teaching process is a process of achieving teaching aspiration and self value. For students, the teaching process is a process of collaborative development between students' emotional involvement and research development.

(2) Teaching and learning is a process of changing roles. In the course of project teaching, the nature of communication determines the change of teaching and learning. “Specialize in”, “Wen Tao prior” teachers initially granted plays a organizational coaching guide role, but with the progress of the teaching process, teachers will appears with the identity of a participant and collaborators in the activities. At the same time, the students are not always in accept the role of learning, in unconsciously or receiving or explore, in exchange, students to their own life experiences and his knowledge reserves may be living in a teacher's position.

(3) Teaching and learning is an interactive process. Teaching and learning are in an open state, at any time in exchanges and interaction with people. Therefore, in the PBL classroom teaching process has uncertainties, the teaching process is along set project to develop project plan, implementation of the project activity - making projects works display of works of the project, the project evaluation of the main, but the development of these links is not constant, between them is cyclic and mutual between not only have the cohesion, but also affects mutually, the elements of the

link is dynamic, elements of the internode and influence each other. 2 the relationship between teachers and students

In the PBL classroom, both the existing physical and chemical knowledge, but also the hidden ideological and emotional factors, in the unconscious of the student's value. In the PBL classroom, the interaction between teachers and students, students and students, individuals and groups is the basic form of teaching to exist and coordinate development. Communication is a significant feature of the teaching mode based on PBL, which is different from other teaching modes. The communicative features of teacher student relationship are expressed in:

(1) The relationship between teachers and students is democratic and equal. The establishment of democratic and equal relationship between teachers and students symbolizes the establishment of students' main body status. Students are in such a democratic and equal learning environment, in order to correct attitude, without fear of the implementation of the project based learning, to fully express their views [8].

(2) View of the existence of the integration between teachers and students. In the project teaching class, the teaching content and the related information between teachers and students. Among them, including the completion of the project to communicate the necessary resources, including the exchange of academic ideas. It is true that there are other forms of vision integration in the classroom.

For the PBL curriculum, the teaching process is the process of combining the implementation of a teaching and creative generation, teachers in the implementation of curriculum shall, according to the actual teaching and learners' personality characteristics, effective reform, development and creativity of teaching to generate. In the project teaching, the teaching resources are open. Students in communication with students, teachers, from their side to learn more than from the teaching material. Teaching resources in the multi-dimensional interaction between teachers and students constantly generated, but also by the students in the exchange of continuous assimilation and absorption [9].

4. Summary

Firstly, the educational technology specialty practice curriculum teaching present situation were investigated by the experimental data statistics and analysis shows that, the current educational technology specialty practice curriculum teaching, there are a lot of problems, the teaching methods, teaching evaluation methods need further improvement. Secondly, in accordance with the PBL teaching mode in the related theoretical knowledge and educational technology specialty practice courses teaching current situation to construct the educational technology specialty practice curriculum based on PBL teaching mode, combined with the website design and development of the course were teaching practice, and has carried on the investigation and analysis of the effectiveness of teaching. Practice shows that both the students and the teachers have shown a high interest in the PBL teaching model. Through the project based learning, students' mastery of curriculum knowledge and skills related to the more skilled, teaching in classroom project approval degree is generally high, the cooperation ability, communication ability, autonomous learning ability and collaborative learning ability of the identity showed a clear upward trend. In addition, students through project based learning, not only to consolidate the theoretical knowledge, and exercise the practice operation skills, under proper guidance teachers, enhance the interest and initiative of study and practice courses, promote the cooperation and communication ability, self-learning ability, cooperation learning ability and problem analysis and problem solving the coordinated development of. At the same time, the professional level of teachers in the implementation of PBL teaching process can also be effectively improved. From the study, we can see that PBL is a feasible and effective teaching model, in the actual teaching of educational technology specialty practice courses should be paid attention to, and to in the future continue to teaching practice should be perfected and improved.

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