

The Application of “Internet Plus Project” Teaching in the Course of Applied Mathematics

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Abstract: In the teaching activities of Applied Mathematics, based on the influence of the Internet information age, the Internet plus project teaching method can bring into play the advantages of Internet information resources and build a project oriented teaching organization system, thereby improving the comprehensive effect of teaching activities in engineering applied mathematics. Based on the influence of the Internet era, the paper explores the measures of “Internet plus project” in the teaching practice of Engineering Applied Mathematics from the angle of “innovative teaching content structure system, reform project teaching methods and methods, building project results display platform, improving teaching evaluation system and integrating teaching resources supply system”. It aims to build a new teaching organization system and effectively serve students' learning and exploration of professional curriculum content.

1. Introduction

In the field of higher vocational education, project-based teaching is one of the more important organizational methods. Effectively promoting the planning and design of project-based teaching activities can lead students to solve practical problems efficiently in the process of learning curriculum knowledge. In the era of Internet, the construction of the Internet plus teaching organization system can explore the construction of diversified learning channels and effectively promote students' learning and practice of curriculum knowledge under the support of Internet information technology. Therefore, in the process of reforming the teaching activities of engineering applied mathematics, we can actively explore the organization and implementation of “Internet plus project” teaching, show the advantages of teaching reform, and effectively promote students' efficient learning of the content of engineering applied mathematics, and master the main points of knowledge content.

2. The Concept of “Internet Plus Project” Teaching

Project-based teaching specifically refers to taking the cultivation of students' comprehensive ability as the main goal in the process of actually promoting classroom teaching activities, designing teaching projects, and completing the projects jointly by teachers and students.

Project-based teaching is a relatively widely used method in the field of higher vocational education. With the help of project-based teaching, the organization and planning of curriculum teaching activities can give better play to the advantages of curriculum teaching, serve professional curriculum teaching, enable students to obtain good development efficiency in the study of professional curriculum knowledge, and cultivate students' problem-solving ability in project practice, Promote the effective exercise of students' comprehensive quality. Internet plus project teaching is based on project teaching, and Internet information technology is used to assist teaching activities. The integration of Internet plus teaching and project teaching can highlight the flexibility of project teaching, and facilitate teachers to implement targeted guidance to students in accordance with the needs of teaching activities in engineering application mathematics. Making the content of project teaching richer and the process more reasonable can better promote students' effective learning of curriculum knowledge [1].

3. The Practice of “Internet Plus Project” in the Teaching of Engineering Applied Mathematics

Based on the practical needs of the teaching reform of engineering applied mathematics, in the new teaching reform practice, in order to give full play to the integration of Internet information technology and project teaching, teachers should actively explore the scientific organization of “Internet plus project” teaching, so that teaching activities can show the advantages of the curriculum. It can provide relatively professional guidance for students to explore the course content. The following is a systematic analysis of the teaching reform practice of Engineering Applied Mathematics supported by the Internet plus project.

3.1 Innovative Teaching Content Structure System

In the process of reforming the course teaching activities by introducing the Internet plus project teaching mode, we can design and adjust the teaching contents according to the specific project task requirements in the project teaching practice, so that the arrangement of teaching content can fit in with the project tasks in project teaching. The teaching of students' professional ability should be set according to the time of the project and the background of the project. In the process of promoting the joint implementation of project-based teaching and Internet information technology, we should use the Internet information resource retrieval system to systematically retrieve and introduce rich project-based teaching tasks according to students' professional development direction, so as to ensure that the design of teaching project tasks can not only attract students' attention, but also reflect the characteristics of practicality and creativity, Keep pace with the times, integrate into the cutting-edge knowledge content of the discipline, and guide students to practice and explore.

For example, in the process of carrying out project-based teaching activities based on “matrix operation” in the course of engineering applied mathematics, in order to make students intuitively feel the effective application of curriculum knowledge, teachers can introduce new knowledge points to the planning of project content and teaching content in the process of building project-based teaching system relying on the application of Internet information technology, Reconstruct the content system [2]. In the actual planning of the project content, teachers can organize students to explore the “cloud computing environment of the verifiable matrix outsourcing calculation” project. In view of the Internet plus era, the microcomputer computation can not meet the engineering calculation and scientific research situation. Based on the support of the cloud computing environment, we will try to explore the frontiers of matrix computing. The new teaching content system is used to assist students' learning and practice of curriculum knowledge, and cultivate students' learning ability of Engineering Applied Mathematics in colleges and Universities,

so that students can not only learn curriculum knowledge, but also exercise their ability to solve problems effectively. It is worth mentioning that in the process of introducing project-based teaching activities, the screening of project content should carefully analyze what needs to be done and how to guide students to participate in learning practice. Moreover, the project content is not enough. It can be adjusted and optimized in combination with the changes of Internet information to make the learning process more relaxed and interesting.

3.2 Reform Project Teaching Methods and Means

In the practice of project-based teaching, in order to achieve good development relying on the support of Internet information technology and prepare students for the exploration of course content. In the process of education and teaching reform in the new era, teachers can analyze the main contents of engineering applied mathematics, make rational use of Internet information technology to reform and optimize the design of teaching projects, and try to introduce different teaching methods and teaching guidance systems into project teaching, so as to effectively promote students' in-depth learning of engineering applied mathematics [3]. First of all, we should continue to continue the advantages and contents of traditional teaching methods. We can comprehensively adopt the teaching methods suitable for the teaching of engineering applied mathematics to implement targeted teaching guidance for students, and focus on optimizing blackboard teaching and teachers' detailed explanation methods, so that students can deeply understand the theoretical knowledge of the course and deepen their understanding of the course content. Secondly, we should try to apply and innovate modern teaching methods according to the plan and content of project-based teaching, so as to ensure the effective organization and implementation of project-based teaching. In specific teaching activities, teachers can combine the application of Internet information technology, introduce competition working mechanism, design game teaching links, and require students to complete results reporting in the process of building project-based teaching system. When organizing students to study the contents of engineering applied mathematics, we can also play the role of electronic whiteboard and statistical software, build a multimedia teaching and virtual teaching organization system, ensure the optimization of network teaching resources, and support the effective implementation of project-based teaching activities in the Internet environment.

For example, in the project-based teaching practice related to “matrix operation”, in order to enable students to have an in-depth understanding of the knowledge of “verifiable matrix security outsourcing calculation”, teachers can innovate teaching means and methods in the process of constructing project-based teaching, and adopt the teaching tool of the integration of multimedia demonstration teaching and interactive whiteboard teaching, It also designs teaching activities from the perspective of encouraging students' thinking creation, so that students can generate more inspiration in learning practice and reflect on the teaching content, so as to effectively stimulate and guide students' efficient learning of the course content. In project-based teaching practice, through the application of information technology, teachers guide students to explore the “verifiable matrix security outsourcing computing” project with the support of cloud environment, and can deeply perceive the effective application of information technology in project practice activities, so as to ensure students' learning of curriculum knowledge under the support of project teaching, Rationalize the ability of students to apply knowledge to solve practical problems, effectively improve the comprehensive effect of classroom teaching activities, and significantly improve the quality of talent training in Colleges and Universities [4].

3.3 Build a Project Achievement Display Platform

Based on the construction of the Internet plus project teaching mode, in view of the reform and innovation process of the teaching activities of engineering applied mathematics, teachers can change the limitations of traditional teaching activities, and not only make positive guidance to students' learning of curriculum knowledge according to project teaching, but also enable students to perceive the effective application of mathematical knowledge in learning practice. Be able to have a new understanding and understanding of the course knowledge of engineering applied mathematics [5]. At the same time, in the process of carrying out project-based teaching activities in colleges and Universities, we can also give full play to the advantages of Internet information technology service project-based teaching activities, build a project achievement display platform, so that students can display the results of their group's participation in project-based learning on the platform, and other groups in the class level Other students in the school can discuss and explore the students' completion of the group project results, point out the shortcomings of the project results, or put forward reasonable suggestions for the design and optimization of the project practice and exploration process. Group members can also communicate and exchange with others on the platform in combination with the group's project display results, Ensure that project teaching can play a corresponding value and role.

For example, based on the actual situation of the teaching activities of engineering applied mathematics, teachers can explore the construction of project-based teaching system after organizing students to participate in the project practice of “matrix operation” course, integrate the results of project exploration after students complete the project time, and organize students to display the results of completed projects on the platform, Put forward their own perception and views on participating in the project activity of “matrix operation”. In the process of participating in the project display and project discussion, students can be inspired and guided by the ideas of other students, can more accurately understand the application of “matrix operation” in life, and can also have a deep understanding of the content of “verifiable matrix security outsourcing calculation”, so as to improve students' comprehensive learning effect and practical exploration ability of course knowledge, Provide a solid guarantee for the cultivation of students' professional quality in Colleges and Universities and consolidate the foundation for the innovative development of talent cultivation in Colleges and Universities [6].

3.4 Improve the Teaching Assessment and Evaluation System

In the process of introducing the project-based teaching system according to the teaching needs and systematically reforming and innovating the project-based teaching with the application of Internet information technology, we should also pay attention to the reform and innovation of the teaching evaluation system and form a new teaching evaluation organization system according to the requirements of practicing the ideas and ideas of project-based teaching, We can make a positive evaluation on students' learning of Engineering Applied Mathematics in close combination with the organization and implementation of Project-based Teaching [7]. Specifically, in the process of innovating the teaching system of Applied Mathematics in colleges and Universities, according to the characteristics and rules of integration of project teaching and Internet plus teaching, the teaching evaluation should focus on the evaluation of students' occupation quality, the evaluation of comprehensive practical ability, the evaluation of learning process and the evaluation of theoretical knowledge, so as to form an integrated assessment and evaluation system. Make an objective and accurate judgment on students' participation in project-based learning. In the process of reforming the project-based teaching evaluation system, we need to focus on the following aspects:

First, assessment and evaluation should be made according to the tasks related to different

knowledge points in the project activities. Each project task will involve different assessment standards of knowledge points. In the teaching evaluation, attention should be paid to students' teamwork, innovative spirit, rule awareness, learning attitude, questioning ability, etc, Make the process evaluation and result evaluation of task assessment organically integrate, try to make a relatively objective and accurate judgment on students' participation in project tasks, guide students to more accurately understand their advantages and disadvantages in the process of participating in project tasks, and let students continuously develop and improve themselves in project practice [8].

Second, we should objectively examine the characteristics of Engineering Applied Mathematics with strong theory and practice. In the process of introducing assessment and evaluation activities, we can use the way of theoretical knowledge assessment, combined with written assessment to investigate students' theoretical knowledge learning, and build a project-based evaluation system through the support of Internet carrier, Assess students' practical inquiry ability and problem-solving ability in the process of participating in project tasks, so as to ensure that they can make more accurate judgments according to students' participation in project learning, highlight and strengthen the comprehensiveness and systematicness of project teaching, and enhance the overall quality and effect of teaching activities.

Thus, we can rely on the influence of “Internet plus project” teaching activities, and focus on the design and improvement of the teaching activity evaluation system of engineering applied mathematics, to ensure that the teaching activities can really fit the requirements of students' knowledge of engineering applied mathematics, and effectively guide students to learn and explore curriculum knowledge. Effectively enhance the overall development effectiveness of teaching guidance activities [9].

3.5 Integrate the Supply System of Teaching Resources

In the process of reforming the teaching activities of Applied Mathematics, we should give full play to the advantages of project teaching and implement project teaching guidance according to the needs of teaching. Teachers should integrate teaching resources according to the needs of teaching in the process of combining Internet plus project teaching mode in the process of reform and innovation. Optimize the supply system of teaching resources, ensure the integration of internet teaching resources, build a project-based teaching resource database that meets the teaching needs of engineering applied mathematics, and ensure the overall effectiveness of teaching organization activities. Generally, in the process of actually promoting the construction of teaching resource database, colleges and Universities should abandon the traditional phenomenon of paying attention to the construction of resource database and ignoring the application of resource database resources. They should not only integrate and sort out the teaching resources on the Internet platform according to the teaching needs of engineering applied mathematics, but also classify the resources according to the exploration needs of different projects, Form different resource blocks to meet the needs of students to participate in project-based learning and practice. At the same time, in the process of carrying out teaching activities, the school should also build a resource management system for the application of teaching resources, and regularly evaluate the application of resources in Teachers' project-based teaching practice, so as to ensure that problems can be found, adjusted and improved in time and effectively in the work of resource management and resource supply, so as to give effective play to the supporting role of teaching resources, Comprehensively improve the overall quality and level of project-based teaching of engineering applied mathematics .

For example, in the process of carrying out project-based teaching activities based on “matrix operation”, teachers can screen the teaching resources related to the “matrix operation” project in the teaching resource database in combination with the application of network information

technology, comprehensively analyze students' participation in project learning, and share various types of teaching resources for students, Assist students to explore project problems, enrich the supply of teaching resources and guide students to standardize the application of teaching resources, so that students can complete the task and plan of project exploration level by level, apply the support of teaching resources, and obtain new theoretical exploration results and learning results in the practice of project exploration, Provide good support for students to participate in the project-based learning of engineering applied mathematics. In this way, with the support of the teaching resource supply system, students participating in the project-based learning practice can not only complete the tasks preset by teachers in the project activities, but also try to divergent thinking and innovate the project activities from different perspectives in combination with the supply of teaching resources, so that the project-based teaching activities can give students a certain degree of autonomy and encourage students to question Imagination and exploration can deal with the project problems in subject teaching in an open, diversified and systematic way, effectively optimize the overall quality and level of teaching activities, and effectively exercise the ability of higher vocational college students to learn the course knowledge of engineering applied mathematics.

4. Conclusion

To sum up, under the background of Internet plus era, exploring the construction of project based teaching system, effectively organizing students' knowledge of engineering application mathematics, can significantly improve the basic situation of teaching activities, and guide students to learn and explore curriculum knowledge. Therefore, in the new era, we should systematically design and develop the teaching activities of Engineering Applied Mathematics in the new era, and organize the project teaching system with the help of the Internet plus teaching force, effectively guide students to learn the curriculum knowledge, so that the teaching activities in the new era can show a healthy development trend. It can scientifically help students explore the application of knowledge, ensure that the trained people can have strong problem-solving ability and professional development ability, and contribute to the development of the country and the construction of society.

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