Project-Based Teaching Survey Report Based on Network Teaching Platform
-- Taking Computer Majors of Zhenjiang Vocational Technical College as an Example

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Abstract. Under the background of the Internet era, the emergence of network teaching platform provides information network environment and platform support for project-based teaching in vocational colleges. Computer majors in schools have been at the forefront of the implementation of project-style teaching and the construction of online courses. The purpose of this paper is to investigate the current situation and problems of teachers using network teaching platform to carry out project-style teaching in computer majors, in order to provide reference for the reform of project-style teaching under the information environment.

Keywords: Network teaching platform; project-based teaching; computer majors

1 Introduction

The Guiding Opinions of the Ministry of Education on Further Promoting the Development of Vocational Education Informatization (No. 4, 2017) proposed to deepen the innovation of education and teaching mode, carry out the research and practice of vocational education and teaching mode innovation under the information environment, and vigorously promote the deep integration of information technology and education and teaching. Under the background of the Internet era, the emergence of network teaching platform provides information network environment and platform support for project-based teaching[1][2]. Since the introduction of the network teaching platform in 2015, our university has taken a series of measures to promote the course construction of the network teaching platform in recent years. Computer majors have been at the forefront of all majors in the school in the implementation of project-based teaching and network course construction. This paper aims to investigate the current situation and problems of computer teachers in using network teaching platform for project-based teaching. In order to provide reference opinions on the reform of project-style teaching in the information environment, the survey mainly adopts the questionnaire survey and interview method.

2 The design of the questionnaire

The main purpose of this survey is to understand the current situation of school computer

teachers using the Fan-ya network teaching platform for project-based teaching, the impact of the Fan-Ya network teaching platform for project-based teaching on teachers and students, and the existing problems of the Fan-Ya network teaching platform for project-based teaching, so as to provide reference and basis for subsequent research. The questionnaire design mainly includes the following contents:

- The basic information of the respondents;

- Teachers' attitude towards the implementation of project teaching in their majors and the status of the course construction of Fan-ya network teaching platform;

- The use and resource construction status of the network teaching platform;

- Teachers' attitude towards the implementation of project-based teaching by using the platform;

- The influence of project-based teaching on teachers and students by using the network teaching platform;

- The deficiency of implementing project-based teaching by using Fan-ya network teaching platform.

3 The selection of the respondents

According to the content of the research and the actual situation, the respondents are 47 teachers of computer majors who normally teach in our school. The questionnaire was distributed on the Internet. 47 questionnaires were collected and 47 were valid.

4 Analysis of survey results

4.1 Basic information of the respondents

Basic information mainly refers to the age information of the respondents. Among the 47 computer teachers, 5 are under 30 years old, 34 are between 30 and 40 years old, 7 are between 40 and 50 years old, and 1 is over 50 years old. It can be inferred from the above data that teachers under the age of 40 account for 83% of all computer teachers. The teachers of computer major in our school tend to be younger, have age advantages in the use of network platforms for teaching in the Internet era .

4.2 Teachers' attitude towards the implementation of project teaching in their majors and the status of the course construction of Fan-ya network teaching platform

According to the survey of teachers' attitude towards the implementation of project-based teaching in their majors, 74% of teachers strongly support the implementation of project-based teaching in computer majors, 18.5% of teachers support it, 7.4% of teachers hold a neutral attitude and no teachers oppose it, as shown in Figure 1. It can be seen that the vast majority of teachers of computer majors support the implementation of project-based teaching in computer majors, which provides a feasible basis for the subsequent implementation of project-based teaching through network teaching platform.
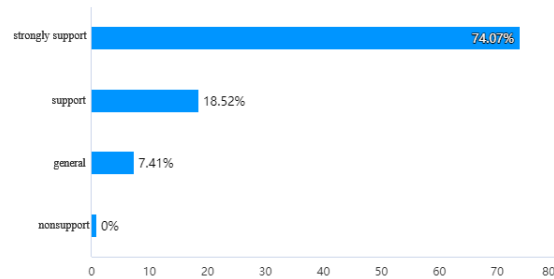
Figure 1. Do you support the implementation of project-based teaching in your major

According to the survey on the course construction status of the network teaching platform, 71% of teachers have created professional courses on the network teaching platform. According to statistics, more than 20 kinds of professional courses have been created, such as web design and production, graphic design, film and television post, JavaScript project practical training courses,.NET development, network operating system, etc. Some teachers have created 2 or more online courses. Among them, 79% of the teachers have implemented project-based teaching in online courses, which also provides practical support for follow-up research on the development of project-based teaching.

4.3 Current situation of the use and resource construction of Fan-ya online teaching platform

The construction of the network teaching platform integrates teachers' teaching and students' learning. The functions of the network teaching platform are mainly to upload learning resources, assign homework, class tests, statistics and examinations, among which the probabilities of uploading learning resources and assigning homework are 94.74% and 100%, and the probabilities of testing and statistics are73.68% and 68.42%. These data fully show that teachers of computer majors can proficiently use the main functions of the network teaching platform, and carry out the teaching activities according to the platform and view the teaching effect.As shown in Figure 2.
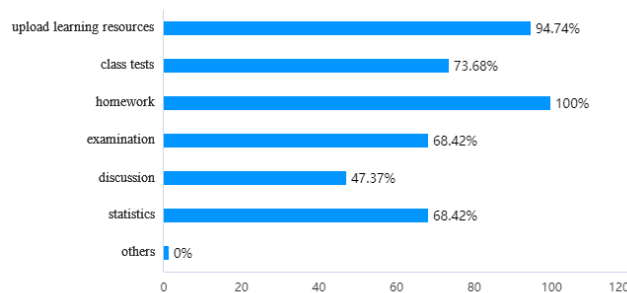

Figure 2. The functions often used by teachers to carry out project-based teaching with the platform

According to the survey, when teachers use the network teaching platform to conduct online

teaching, PPT and teaching videos are the main resources uploaded by teachers, and there are not a few self-made micro-lessons and animations. The construction of digital teaching resources is rich, and fully satisfy the learning needs of students.As shown in Figure 3.
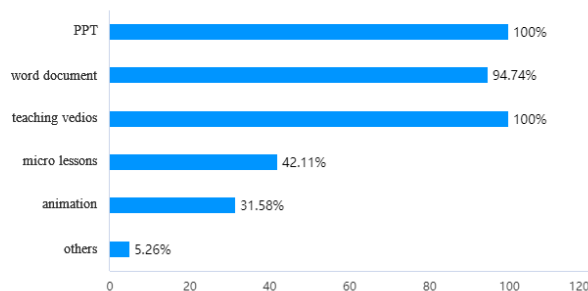

Figure 3. Types of resources uploaded by teachers using the network teaching platform of Fan-ya

4.4 Teachers' attitude towards the implementation of project-based teaching by using the network teaching platform

As for the teachers who use the platform for project-based teaching, the survey found that only 26.67% of them use the platform for project-based teaching "every day", while 40% of them choose "2-3 times a week" and 33.3% of them choose "once every two weeks or longer". The data show that the frequency of teachers using the platform for project teaching is not very high, and the enthusiasm is insufficient.As shown in Figure 4.
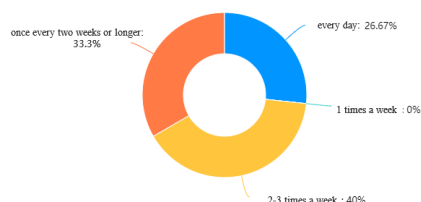

Figure 4. Frequency of teachers using the Fan-ya network teaching platform for project-based teaching

Although the frequency of use is not high, the vast majority of teachers have a positive attitude towards whether Fan-ya online teaching platform supports project-based teaching. The survey data shows that 40.74% of teachers strongly support it, and 37.04% of teachers relatively support it, as shown in Figure 5. When investigating the reasons, teachers all said that the platform can upload learning resources on its own, which is convenient for students to learn independently, can check the students' completion of learning tasks and homework in real time, and can analyze the learning situation according to the data of students' learning behavior. At the same time, it can form a teaching resource library of curriculum projects in the process of curriculum construction. These functions and characteristics of Fan-ya network teaching platform can well support the implementation of project-based teaching[3].
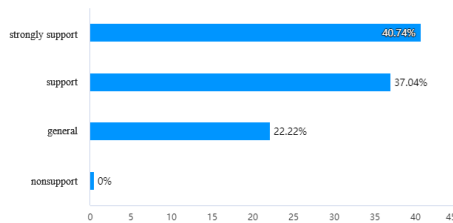
Figure 5. Whether Fan-ya network teaching platform supports project-based teaching

4.5 The influence of project teaching on teachers and students by using Fan-ya network teaching platform

In the investigation of the impact of using the network teaching platform for project-based teaching on teachers' teaching, teachers all agree that using the network teaching platform for project-based teaching will help teachers establish the correct information teaching concept, improve the production ability of teaching resources and the integration ability of project-based teaching resources, improve the application level of information technology and improve project-based teaching methods. As shown in Figure 6.
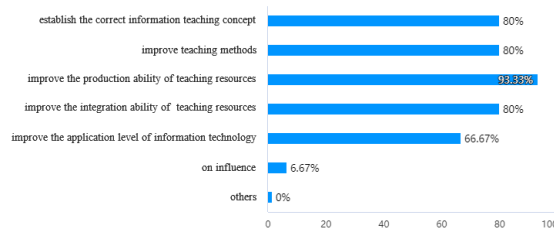

Figure 6. The influence of project teaching on teachers' teaching by using Fan-Ya network teaching platform

In terms of teaching effect, 93% of teachers think that teaching effect is very obvious or relatively obvious, and the change of learning attitude of middle school students in the process of project-based teaching is also relatively large, accounting for 73.33% of the proportion of very large or relatively large, as shown in FIG. 7 and 8. Meanwhile, students' independent learning ability is significantly improved, their learning participation is active, and their professional skills are significantly improved. The specific data are shown in FIG. 9, 10 and 11.
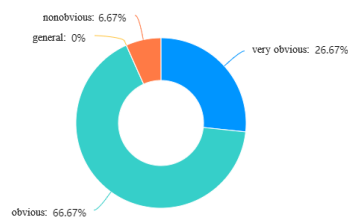

Figure 7. Whether the teaching effect is obvious by using Fan-Ya network teaching platform for project-
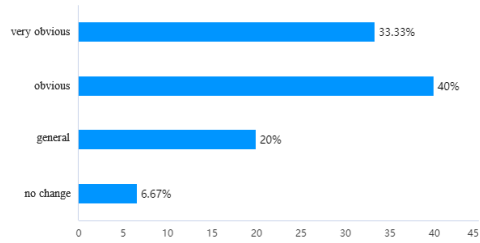
based teaching

Figure 8. Change of students' learning attitude when project teaching is carried out using Fan-ya network teaching platform
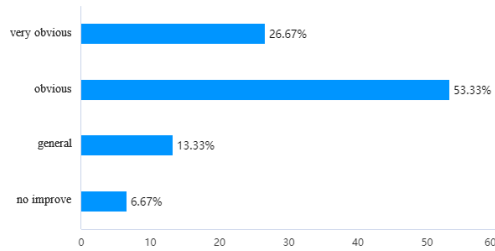

Figure 9. Students' independent learning ability can be improved by using Fan-ya network teaching platform for project-based teaching
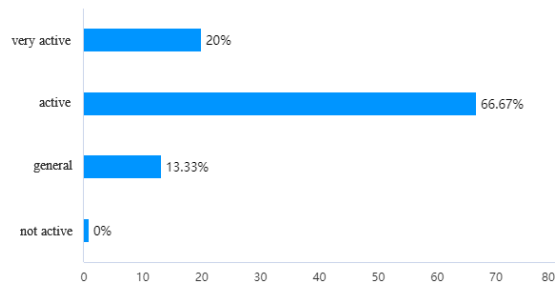

Figure 10. Students' learning participation in project-based teaching using the Fan-ya network teaching platform
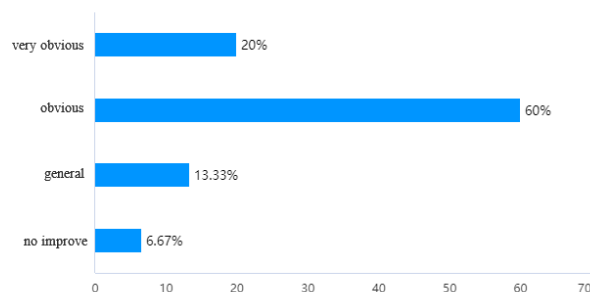
Figure 11. The improvement of students' professional skills in project-based teaching using the Fan-ya network teaching platform

4.6 The shortcomings of implementing project-based teaching by using Fan-ya network teaching platform

In addition, the author also conducted a survey on the shortcomings of using Fan-ya network teaching platform to carry out project-style teaching. The problems mainly focus on the following aspects: first, the professional teaching level of teachers in organizing project-based teaching is limited; Second, the platform can not implement stratified teaching well; Third, some interactive functions of the platform are not humanized enough to achieve real teacher-student interaction.

5 Investigation conclusions

According to the survey, the teachers of computer major in our school use the Fan-ya network teaching platform to carry out project-based teaching, agree that the platform functions support project-based teaching, and generally believe that using Fan-ya network teaching platform to carry out project-based teaching is conducive to integrating project-based digital teaching resources, sorting out the project-based teaching process, and further forming the project-based teaching curriculum system. At the same time, in the process of using the network teaching platform to carry out project-based teaching, the students' independent learning ability is enhanced, and they can actively participate in the learning process, and the students' professional skill level is greatly improved. However, due to the application level of information technology of teachers and some functional limitations of the platform itself, there are still some shortcomings in the use of network teaching platform for project-based teaching.

6 Reflection and prospect

In computer education in vocational colleges, project-based teaching can carry out project design according to the actual teaching content, and exercise students' practical ability and professional skills in the process of project-based teaching, which is conducive to the improvement of students' professional knowledge level and professional practical skills, so as to effectively improve the teaching effect[4]. In today's Internet era, the use of network teaching

platform can provide favorable support for project-based teaching. Through the investigation of this paper, the application status and problems encountered by teachers in the process of using the Fan-ya network teaching platform to carry out project-based teaching are learned. Next, the author will focus on the aspects of teachers' information literacy and the imperfect function of the platform[5][6]. In order to better serve the reform of teaching mode and improve teaching quality.

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