Research on Hybrid Teaching Design and Application Based on the Support of Smart Classroom Platform

--A Case Study of Computer Basic Courses in Higher Vocational Colleges

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Abstract: With the development of information technology and the improvement of education level, teaching theories based on the support of the smart classroom platform came into being. Among them, the use of mixed teaching methods has been generally recognized by teachers. In order to improve the computer teaching ability of higher vocational colleges, it is necessary to increase the research efforts on mixed teaching design and application. By combining the actual situation of students, a more educational teaching method is explored to help students get out of learning difficulties, understand and master more computer knowledge.

1. Introduction

From a certain level, the smart classroom platform contains a variety of advanced teaching technologies and contains a wealth of teaching experience. Due to its intelligent and individual characteristics, a more relaxed, free, and comfortable teaching and learning environment has been built, and the “tangible physical space” and “invisible information space” are connected without dead ends, which fundamentally solves the problem of students’ problems. Will learn, difficult to learn and other issues. By exploring learning motivation and repositioning learning goals, while optimizing the teaching and learning environment, it effectively bridges the relationship between teaching and learning, and breaks through the constraints of the disadvantages of a single system of local teaching or distance teaching. In particular, relying on advanced technologies such as cloud computing and the Internet of Things, it restores the context of knowledge content, strengthens the management of the teaching environment, and integrates the two to optimize the generation process of students' thinking. By changing the status of teaching and learning, interacting with the relationship between people and the environment, a more ideal teaching environment is created for teachers and a high-quality learning space is provided for students. Due to the intelligence of the smart teacher platform, the efficiency of students' acquisition of required resources has been improved, the connotation of various knowledges has been three-dimensionalized, the “difficulties” in students' learning have been found from the source, and the difficult learning has been solved in a timely and effective manner problem. Especially under the effect of the mixed teaching system, teachers only need to build basic courses, strengthen teaching guidance, and rationally arrange teaching tasks to promote the personalized development of teaching and learning, and to teach students in a true sense.

With the development of information technology and the upgrading of teaching technology, the application of mixed teaching methods has become more and more widespread. Especially in this teaching method, the effect of the word “mixed” is fully demonstrated. As the name suggests, blended teaching is a new teaching strategy that combines the advantages of online and offline teaching. It adheres to the principle of “taking the essence and removing the dross”, solves the problems of online and offline teaching, and gives full play to the advantages of online and offline teaching. It can educate students from multiple angles and enable students to be in the classroom. Learn from the shallower to the deeper, from the outside to the inside. When constructing a mixed teaching system, teachers need to adhere to the student-centered teaching principle and reasonably control the time of “combination” and “separation”. Must do: There are sufficient and abundant

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learning resources online. There are wonderful and high-quality teaching activities offline. In online teaching, teachers need to combine the learning needs of students, and provide systematic and in-depth explanations on the key points, difficulties, and doubts in teaching, so as to promote students to improve their ability of inquiry and learning. In offline teaching, teachers need to use teaching activities to test students' grasp of knowledge. Relying on graded homework exercises, gradually consolidate students' learning achievements. When students have problems in offline learning, they should be urged to switch their learning perspectives, use online teaching resources to find solutions to problems, and fundamentally improve students' professional quality. In addition, in the process of blended teaching, it is necessary to give full play to the effectiveness of the evaluation mechanism. By accurately implementing the evaluation in online and offline learning, we can have a deeper grasp of the students' learning dynamics, so as to formulate more qualitative and effective teaching strategies to improve teaching effects.

2. The Role of Blended Teaching in Basic Computer Courses

2.1 Enhance Learning Interest and Strengthen the Memory of Knowledge

In the teaching of basic computer courses in higher vocational colleges, strengthening the use of blended teaching methods is an effective way to increase students' interest in learning and strengthen students' memory ability. As we all know, computer knowledge is extensive and profound, and mastering its knowledge needs to be based on practical operations. Relying on a single online or offline teaching, it cannot meet the learning needs of students. The mixed teaching mode effectively breaks the derailment of theory and practice, and also solves the problem of the integration of theory and practice. Through the combination of online guidance and solid offline teaching mode, it provides space for students to explore their learning potential, and can fully stimulate and cultivate their interest in learning, promote students to integrate their own situation and deepen their computer knowledge, which greatly improves students’ Basic computer skills.

2.2 Satisfy Basic Teaching Needs and Realize Teaching Students in Accordance with Their Aptitude

With the support of smart teacher platform technology, adhere to the use of hybrid teaching mode, not only can meet the teaching needs of basic computer courses, but also help improve the results of computer teaching. In the traditional teaching mode, teachers only carry out systematic knowledge explanations around the content of textbooks and teaching materials. Due to the failure to meet the individual needs of students and the failure to establish a student-centered teaching system, the teaching is too boring and the teaching effect is not ideal. For a long time, students have lost their interest in learning and confidence in learning, and they have developed the learning habit of “deadly reading and deadly reading”, which is seriously detrimental to the improvement of students' professional level. With the use of mixed teaching methods, this awkward teaching situation has been effectively improved. Through the use of smart technology, the basic course knowledge is three-dimensional, and the way of expressing knowledge is reinterpreted in the form of online courseware. This not only broadens the horizon and stimulates interest, but also lays a good foundation for in-depth teaching.

2.3 Optimize the Content of Textbooks and Teaching Materials to Promote Deep Learning

With the support of the smart classroom platform technology, teachers can make the content of blunt textbooks fun to help students find points of interest in learning, and promote and realize deep learning. Using a mixed teaching model to create a dynamic teaching environment can effectively strengthen the supervision and management of students' learning process. First of all, teachers can carry out systematic classroom teaching around the knowledge that students are interested in. Combining advanced information technology and simulating the use of computer knowledge, students can understand the content of basic computer courses from the perspective of work and life. Secondly, teachers can use the blended teaching model to find out the causes of students' problems

in learning. Use advanced technology to unblock students' thinking system, so that students can solve problems in time, so as to shorten the distance between students and computer knowledge, and cultivate students' inquiry ability. Thirdly, with the use of blended teaching methods, teachers can optimize the content of teaching materials in a targeted manner. Giving full play to the role of students' main learning status and allowing students to independently choose their favorite learning routes can promote students' deep learning knowledge while alleviating the contradiction between teaching and learning. Finally, by using blended teaching, teachers can improve technical support for offline teaching. By strengthening the applicability and practicality of basic curriculum knowledge, we can further analyze and study the deficiencies of students' learning, so as to develop better learning strategies for students.

3. Hybrid Teaching Design and Application Strategy Based on Smart Classroom Platform Support

In order to ensure the effect of mixed teaching, teachers need to strengthen the management of pre-class, in-class, after-class, assessment and other steps, promote the effective connection of various teaching links, ensure the reasonable arrangement of teaching content, and strictly manage classroom discipline to prevent students from appearing “Dropping” situation. By giving full play to the advantages of online and offline teaching, students will gradually improve their concentration, promote students to discover and solve learning problems in time, and fundamentally improve the effectiveness of computer teaching.

3.1 Do a Good Job of Pre-Class Guidance and Encourage Students to Study Freely

In order to consolidate students' computer skills and improve students' ability to use knowledge, teachers need to do a good job of pre-class teaching and guidance, encourage students to inquire about learning task lists, and promote students to prepare for pre-class learning. First of all, teachers should design learning goals scientifically and reasonably in combination with students’ classroom performance, exploration ability, and learning methods. Relying on the learning content of this section of the course, students are required to complete video learning tasks autonomously and freely within the specified time. In order to improve the learning outcomes of students, teachers can allow students to conduct detailed exchanges and discussions in small groups, and encourage students to share their learning experiences, so as to achieve “rejection and confusion” among students. Secondly, teachers do not need to give timely guidance to students’ “unsolvable” problems during pre-class preview, but instead require students to log on to the relevant learning platform to solve problems by finding resources and asking questions. In this way, teachers can develop and cultivate students' problem-solving thinking while training students to explore knowledge. Finally, teachers should strengthen the detection of preview effects. Relying on the students' scores in the self-test process, the learning state of the questions, etc., to find the entry point of teaching in the class. By strengthening the teaching interaction with students, we can further clarify students' learning needs and prepare for in-depth teaching in class.

3.2 Strengthen the Teaching Effect in Class and Cultivate Students' Learning Ability

When carrying out in-class teaching, teachers must give full play to the effect of “mixed” teaching, strengthen the organic combination of online education and offline activities, so as to improve the teaching effect while further training students' learning ability. First of all, before teaching in class, teachers need to use platform technology to guide students to sign in. By ensuring the authenticity of students' participation in learning, students can be given meticulous teaching guidance. Secondly, teachers should check and accept the results of pre-class preview based on the online self-study of students. Relying on the difficulty of the exercises and the students' self-test scores, count the problems that students are difficult to solve. Then carry out systematic course teaching to help students clear out the “don't understand” in the study and acquire the correct way to solve the problem. Third, teachers should do a good job in introducing knowledge context. After playing the corresponding micro-class teaching video, we will work with students to study how to

complete the learning tasks of this lesson, so as to clarify the context of knowledge and cultivate students' deep learning habits. Finally, teachers should stimulate students' interest and enthusiasm for learning, and skillfully use network platform technology to visualize students' questions. By allowing students to explore ways and means to solve problems in cooperative learning, to maximize the divergence of students' thinking and develop students' intelligence. Then focus on the problem, broaden and extend other knowledge, strengthen the training of basic abilities, so that students can learn by analogy and learn by analogy.

3.3 Complete the after-Class Evaluation Work to Consolidate students' Learning Achievements

In order to deepen students' learning ability and consolidate students' learning achievements, teachers need to use the educational function of "blended teaching" to improve the quality and effectiveness of after-class summary and evaluation. By improving the evaluation mechanism of class learning and homework completion, it helps students understand the shortcomings of their own knowledge from multiple angles, and promotes students to learn again and in-depth. First of all, in the after-class evaluation, teachers should make detailed comments on the works completed by students. In this process, teachers not only need to consider the depth of the homework, but also need to combine students' performance in the classroom to comment on the students' knowledge of the situation, so that students can find thinking mistakes, and do a good job in checking deficiencies. Secondly, teachers should strengthen the exchange of ideas with students and assign learning tasks of different difficulty to students of different qualities. By telling the precautions for homework, students are encouraged to think carefully and repeatedly about problem-solving methods, so that under the guidance of teachers, they can digest and absorb key, difficult, and doubtful knowledge in a timely manner. Third, teachers should rely on smart classroom platform technology to carry out a variety of summary and evaluation activities. Adopt the form of "questionnaire survey" to summarize the advantages and disadvantages with students, so that students can recognize their own abilities more clearly. Finally, teachers should reorient their teaching and study teaching strategies in depth to pave the way for students' next learning. From the perspective of students, strengthen the application of blended teaching, so as to improve students' learning ability in a targeted manner when formulating learning strategies for students.

3.4 Improve the Assessment Mechanism and Highlight the Essential Relationship between Teaching and Learning

In order to master students' learning ability and achieve efficient assessment of students, teachers can use platform technology to detect and accept students' learning at a certain stage. By broadening the specific subjects to be assessed, correcting the students' learning attitude, so as to promote the students to better understand themselves while highlighting the relationship between teaching and learning. First of all, teachers can add some new subjects in the assessment based on the actual situation of teaching, such as the degree of watching videos, the number of times to participate in topic discussions, the number of reading resources, and the efficiency of completing learning tasks, so as to fully realize the comprehensiveness of students. Evaluation, to promote teachers to accurately control the ability of students. Secondly, teachers should ensure the authenticity and effectiveness of the assessment. By adopting the form of "group member supervision", each student can take turns to be a "invigilator", thereby gradually improving the fairness and openness of the evaluation, essentially mobilizing the students' ability to participate in learning, and giving full play to the student's dominant position in the classroom . Finally, teachers should reorient their teaching strategies based on the assessment of students. Aiming at the insufficient performance of students in the assessment, special training is carried out for students to promote students to actively improve themselves in the future study, and strive to absorb learning experience, so as to cultivate students' comprehensive computer quality.

4. Conclusion

In short, with the support of the smart classroom platform, rational design and use of blended teaching methods will help enhance students' interest in learning and improve their ability to participate in learning. By strengthening the advantages of online and offline teaching, optimizing the content of basic computer courses, and gradually improving teaching links such as pre-class preview, in-class teaching, after-class summary, assessment and evaluation, the distance between students and computer knowledge is shortened to the greatest extent. Promote the growth of students in deep learning and strive to improve their professional abilities and qualities.

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