

On-line and Off-line Informatization Teaching in Colleges and Universities based on Rain Classroom

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Abstract: Taking the computer information classroom teaching in Colleges and universities as an example, this paper carries out online and offline information-based teaching practice based on rain classroom, breaks through the difficulties of traditional classroom teaching, realizes real-time interaction between classroom teachers and feedback of students' difficulties, forms teaching data in time, effectively improves teaching efficiency, and points out the shortcomings and improvement methods of rain classroom.

Keywords: Rain classroom; Mixed teaching; College teaching reform; Informatization

1. Introduction

With the advent of the "Internet +" era, information technology and traditional subject teaching have been deeply integrated. The traditional classroom teaching mode has been unable to adapt to the new information teaching requirements. Therefore, we need to reform the teaching through new information technology means, and explore more effective classroom teaching mode.

In real life, "Weixin" is a social tool closely related to the people in recent years. The main factor for its rapid development is its strong interaction. In the actual mathematics classroom teaching, teachers use most PPT courseware, exercises and micro-lessons, but the shortcoming is the lack of "interaction", which can not show students' understanding and application of new knowledge in time or feedback to teachers. How to organically combine Weixin with existing teaching resources to serve teaching?

"Rain Classroom" is a mobile network teaching mode based on "Wechat + PPT" for teaching and teacher-student interaction. So there is no need to update the existing hardware teaching equipment, which saves a lot of hardware investment costs for many schools. Moreover, it is based on Wechat Public Number for teaching. It is easy to operate. Teachers need not worry about learning complex software operations any more. They just need to concentrate on teaching courseware, exercises and micro-lessons, and do not need to download APP. This brings great convenience to both teachers and students.

Rain classroom is an interactive free intelligent teaching tool developed by the school online and Tsinghua University Online Education Office. The introduction of rain classroom solves the problem of intelligent terminal connection between teachers and students. It gives students

new experience in every link before class, during class and after class, and maximizes the interaction between teachers and students. Through Wechat Public Signal in Rain Classroom, teachers can push the teaching content to students before class. Students can answer questions in real time in class, or interact with teachers through bullet curtain. In addition, Rain Classroom also has the function of student data analysis. Teachers can grasp the learning dynamics of students very well. The realization of all this is not complicated, as long as we can use Powe-Ponit software and Wechat.

2. Defects of Information Research in Institutions of Higher Learning

2.1. The concept of informatization is not deep enough

In the era of big data, the development of Internet technology has created a new situation in the information age, and has brought new challenges and opportunities to our higher vocational education. The Outline of National Medium and Long Term Educational Reform and Development Plan (2010-2020) puts forward the idea of "improving teachers' application of information technology, renewing teaching concepts, improving teaching methods and improving teaching effect. Students are encouraged to use information to learn actively and independently, and their ability to analyze and solve problems by using information technology is enhanced. Information-based teaching is regarded as the inevitable trend of education development. The reality of our country's investment support is the meeting point. It fundamentally speeds up the improvement of privacy protection legislation, relocates the property attributes of "cloud storage" and "standard-setting" modules in the network system, and

regulates the strategy, standard-setting, technology research and development of for-profit network management and control departments. According to storage and other ways of comprehensive supervision and control, in order to prevent personal data from being interfered and destroyed by external factors.

2.2. Defects of information-based teaching means

Too much emphasis on means, ignoring the knowledge itself. Teaching is a process of design and implementation, the real purpose is to enable students to master knowledge itself; if too much emphasis on information technology means, students only want fresh and interesting means, and the ability of spontaneous learning is getting worse and worse, which may eventually lead to the serious consequences of ignoring knowledge.

The authenticity of learning results and evaluation is slightly lower. Teachers can really understand students' performance in class, but it is difficult to truly reflect the extracurricular situation of denying pre-class preview and reading materials courseware, whether they complete exercises and homework by themselves, and the plagiarism in traditional teaching is still unavoidable. Therefore, the authenticity of assessment means and the authenticity of students' self-study are worth discussing.

2.3. Teachers' inadequate information-based instructional design ability

In the information age, new requirements have been put forward for teachers' information-based teaching ability, which has changed the traditional teaching mode, which requires high requirements for teaching design, which link of the information-based means in the teaching process, how to use them, and whether they can achieve the desired results. These problems require teachers to think deeply and arrange reasonably in the teaching design.

3. Rain Classroom Online and Off-line Information Teaching Method Solution

First, digital teaching resources are difficult to share, teaching resources are scattered everywhere, teachers can not use abundant resources to prepare lessons and teach independently, students have poor preview and review environment, it is more difficult to understand the talent training program and understand the curriculum structure, and there is a lack of interactive communication channels between teachers and students [3]. Second, the existing teaching resource pool is difficult to promote, and the excellent courses, online courses and other shaped teaching resources can not be conveniently and effectively combined with teachers' independent teaching activities. Teachers' ideas are "enslaved", resulting in low application enthusiasm. Thirdly, all kinds of digital resource systems are independent, behavioral data are scattered,

which is not conducive to large data analysis. There are many sources of digital teaching resources, different application modes, no unified entrance, inconvenient use, scattered learning track records, which are not conducive to large data analysis and can not effectively promote classroom teaching reform. Fourth, the traditional multimedia teaching is rigid and ineffective. The process of teaching activities should be the process of stimulating, stimulating and cultivating positive emotions. In traditional multimedia teaching, teachers often sit in front of the platform and teach while operating, with rigid teaching attitude, few body language and lack of direct communication between teachers and students. Fifth, simulation training lacks industry support, insufficient integration of production and education, and the use of various simulation training systems restricted by time and space is often installed in the training room. Teachers can not prepare lessons, classes and students' exercises in and out of class can not be used, so it is difficult to reproduce on the "blackboard". The simulation training projects are not rich and lack of industry support, which can not meet the needs of ubiquitous learning and innovative entrepreneurship education.

3.1. The role of rain classroom

Integrate and share all available teaching resources. It integrates all available teaching resources, such as school-based resources, interactive video tutorials, various simulation training software, and micro-lessons. Teachers use work numbers and students use school numbers to login. All resources are shared, which is convenient for teachers and students to use together. It integrates remote tutoring functions and enriches the channels of teachers and students' extracurricular communication. It solves the integration and sharing of teaching resources, provides a platform for classroom teaching, teacher-student communication, simulation training and self-learning everywhere, and builds a cloud center according to the logic of school (S) - Specialty (P) - curriculum (C) - teacher (T). Teachers upload teaching resources to cloud personal space, students can use cloud platform to complete preview, review, homework upload, and at any time, anywhere through a variety of terminal self-learning. With the development of advanced society, mechanization and intellectualization gradually replace manual work. In order to adapt to the development of the times, we as teachers should also master the use of various teaching tasks, such as processing images, editing audio and video, recording and editing micro-lessons, making animation, using virtual simulation software, etc. Only in this way can we better present knowledge to students, so that students can understand and use it. OK.

The application of rain classroom teaching means can unify the application mode of various digital teaching resources and create conditions for large data analysis.

"Rain Classroom" gathers all available teaching resources, integrates them organically, unifies the platform, entrance and application mode of each system, records the learning trajectory completely, and promotes the innovation and reform of teaching mode and learning mode through big data analysis. The integrated virtual simulation environment promotes the change of classroom form. On the basis of the existing software system, the development of shared teaching resources database and the supporting policies ensure the original accumulation of high-quality teaching resources, and support the construction of shared teaching resources and teachers' classroom multimedia teaching. The operation of cloud classroom makes teachers' classroom teaching return to "original teaching form", which not only integrates the advantages of modern multimedia teaching, but also maintains the advantages of traditional blackboard. It provides a broader development platform for the reform of education, and will greatly promote the transformation of teachers' teaching and students' learning.

4. Conclusion

Rain classroom online and offline information classroom teaching has brought about a historic change in higher education. In this educational historical change, teachers should reasonably and efficiently use various information-based teaching methods in order to achieve the fundamental purpose of teaching. No matter what kind of information-based teaching methods are used, teachers and students should be in line with the purpose of learning knowledge itself, avoid over-formalization, so as to improve the ability of teaching and learning, and really let information-based means help education and teaching. The rainy classroom has formed a new theory of the construction and use of teaching resources, which is based on the idea of teachers' independent teaching and supplemented by other resources. It has perfected a series of systems such as information-based teaching and resource construction. It optimizes teaching strategies and improves teaching methods, better guides students to form effective learning strategies, and promotes the improve-

ment of teaching effect. Classroom effect has been significantly improved, students benefit from a wide range, and teachers' overall ability to apply information technology has been greatly improved. In the future, we will continue to refine the co-construction and sharing mechanism of professional teaching resources in Higher Vocational colleges, and strengthen the coordination with the industry. Combining with the "Renrentong" project, we should strengthen the innovative exploration of the application mode of professional teaching resource bank, and realize student-centered individualized and intelligent learning.

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