

Analysis of Online and Offline Mixed Teaching Methods for Linux Courses

Bin Cui

Nanyang Normal University, Nanyang 473061, China.

Abstract: In the teaching of professional courses, the introduction of information technology teaching mode, currently the most widely used is blended teaching. This teaching mode highlights the student's learning subject status, and the overall teaching effect is significant. Linux course is a highly practical course, and the introduction of blended teaching mode in specific course teaching is of great significance for promoting curriculum reform and development. This article provides a brief introduction to Linux courses, analyzes the importance of blended teaching methods, and explores strategies for effectively applying online and offline mixed teaching modes in Linux courses.

Keywords: Linux Course; Online and Offline; Blended Learning

1. Introduction

In the traditional Linux course teaching mode, students are relatively passive in learning and have low learning outcomes. However, with the help of blended teaching mode, students have stronger initiative in course learning, which is also beneficial for students' multifaceted development^[1]. To fully utilize the positive role of blended teaching mode in Linux course teaching, it is necessary to grasp the key points of classroom teaching, optimize design, and promote the effective use of this teaching method.

2. Linux course overview

Linux course is one of the important courses in computer science, which includes virtual file systems; establishment of a file system; ramfs memory file system; proc file system; devfs file system; We should understand the file system of embedded Linux, modify operating system parameters through the proc file system, and analyze the source code of the romfs file system to create content such as the cramfs file system. From the perspective of course teaching content, it is a highly practical course with certain professional and operational knowledge points^[2]. In traditional Linux course teaching, teachers take the lead and analyze the specific Linux course teaching content, in order to explain the relevant system operation and implementation. The teaching theory is relatively strong. In this course teaching mode, students' learning enthusiasm is not high, learning efficiency is low, and the knowledge and skills related to practical operations are not firmly grasped, resulting in unsatisfactory overall course teaching effectiveness.

3. Overview of mixed online and offline teaching mode

Mixed teaching mode is an online and offline curriculum teaching mode that combines traditional teaching mode and online education mode. By combining two different teaching organizational forms, learners' learning is continuously led towards deep learning. Online and offline blended teaching is also a new exploration of traditional classrooms and information technology classrooms. It requires teachers to build online teaching platforms with the support of the Internet, mobile terminals, etc. in teaching, and guide students to use online platforms to complete autonomous learning tasks of courses. For mixed learning, online resources are the premise and foundation of mixed learning. The mixed learning mode transfers traditional course teaching through video online mode, which can help students break through time and space constraints, ensure that their foundation is strengthened, and improve the quality of course teaching. Through this online learning, teachers can grasp the key and difficult points in classroom teaching, and

receive timely teaching feedback, thereby continuously optimizing course design and improving teaching quality. This mixed teaching model can promote collaboration between teachers and students, continuously enhance students' learning enthusiasm, and break through the limitations of traditional curriculum teaching models^[3].

4. The problems in online and offline mixed teaching of Linux courses

4.1 Shortage of teaching resources and lagging infrastructure construction

The application of online and offline mixed teaching mode in Linux course teaching in vocational colleges requires a comprehensive network support, information-based teaching platform, and sufficient terminal equipment as the foundation. These all require a large amount of investment from schools. However, currently, some vocational colleges have limited construction funds, making it difficult to ensure the comprehensiveness and completeness of relevant information-based teaching equipment. To carry out blended online and offline teaching, it is also necessary to have sufficient information technology teaching resources, in order to provide effective resource support for online preview and after-school exercises of courses, and facilitate students' self-directed learning^[4]. At present, the information-based teaching resources for Linux courses in higher vocational colleges are also very limited, which leads many teachers to want to apply the mixed teaching mode in classroom teaching. However, there are still many problems in the specific course teaching work. The limited information-based resources of Linux courses and the poor adaptability of professional teaching will affect the mixed teaching efficiency of online and offline courses. In terms of building information resources for Linux courses in our school, the enthusiasm of relevant teachers for building high-quality courses is also not high, which leads to difficulties in ensuring the effectiveness of blended teaching.

4.2 Teachers have low information literacy and lack experience in mixed teaching

In the mixed teaching practice of Linux courses, teachers' own information literacy, intelligent education ability, etc. will seriously affect the quality and level of intelligent education. In the process of promoting the mixed development of online and offline Linux curriculum education in vocational colleges, teachers have a weak awareness of voluntary participation and active promotion. They are in a passive state in the mixed online and offline teaching, which is not conducive to the development of educational informatization. Many vocational college teachers are middle-aged and elderly teachers with certain educational work experience. Their acceptance of new things is not high, and the training work on educational informatization carried out by the school is insufficient. This also leads to difficulties in maintaining advanced educational and teaching concepts in education, and the progress of informatization teaching work is slow. Currently, in the mixed teaching of Linux courses in ordinary vocational colleges, many teachers have weak information technology teaching abilities. They excessively rely on resources from teaching platforms in information technology teaching, lack independent thinking consciousness, and directly copy other teachers for some online teaching mode applications. They lack targeted thinking about their own course teaching and students' learning situation, resulting in low quality of their course teaching. The application mode of information technology is single, lacking effective educational concepts and technical support.

5. Online and offline mixed teaching methods for Linux courses

5.1 Accelerating the construction of information infrastructure and improving the construction of course resources

At present, in the process of promoting the development of educational informatization in vocational colleges, it is necessary to have a correct understanding of the connotation of educational informatization, grasp the core elements of information-based teaching, and provide guidance for relevant teachers' educational informatization work, so that teachers can also form a scientific understanding of online and offline mixed classrooms, accurately grasp the key points of classroom teaching, and promote the development of educational informatization.

For the current problem of single educational information resources in the construction of Linux course education information in vocational colleges, vocational colleges should respond to the needs of education reform in the context of epidemic prevention and control in the new era, and take the construction and optimization of online teaching resources for related courses as an important task, in order to actively build a relevant course teaching resource library in the online teaching platform, encourage relevant teachers to

record and upload high-quality course teaching resources, and enrich the content of the teaching resource library. In addition, it is necessary to strengthen cooperation with relevant colleges and universities in the sharing of professional resources, establish connections and data sharing channels with relevant colleges and universities' online teaching platforms, and efficiently share high-quality related course online teaching resources uploaded by other colleges and universities. By constructing such a mechanism for co construction and sharing of course resources, we can promote a more solid foundation for information-based teaching in relevant majors.

5.2 Strengthening teacher training and enhancing information technology teaching skills

In response to the mixed online and offline teaching requirements of Linux courses, vocational colleges must pay attention to cultivating information technology teaching skills for course teachers and continuously improve their information technology teaching skills in classroom teaching. We need to enhance the information leadership of the responsible person, the ability of teachers to apply information technology, and the information guidance ability of the training team. To promote the comprehensive promotion of teacher information technology teaching practice innovation in vocational colleges and the significant development of school education information technology, it is necessary to combine the goals of vocational education information technology construction and construct a new pattern of teacher information technology application ability development that is suitable for it. In the new era, vocational colleges should combine their own professional construction situation and the current situation of information technology teaching to study the necessity of Linux course information technology innovation. To comprehensively improve the information application ability of Linux course teachers, it is necessary to organize relevant course teachers to carry out information-based teaching skills training. Through training, teachers can grasp the key points of the online and offline blended teaching mode, and be able to design the key points of blended teaching in Linux courses. By using the online and offline blended teaching mode, Linux course teaching can achieve ideal results.

6. Conclusion

The application of online and offline mixed teaching mode in Linux course teaching is of great significance for optimizing teaching methods and improving teaching effectiveness. From the current practice of mixed teaching mode in Linux courses, there are still certain problems, so it is necessary to actively explore the reform and innovation path of Linux course teaching, and promote the effective practice of mixed teaching in Linux courses.

References

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