

Based on the Mixed Teaching of Online and Offline Teaching in Civil Engineering Majors from the Perspective of "Integration"

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Abstract: The teaching content of civil engineering major is complex, involving many knowledge points, and the requirements for the teaching mode are higher. Therefore, online and offline teaching is prone to many common problems, through forming professional teachers, develop accurate teaching plan, improve the overall teaching ability, attaches great importance to teachers' teaching quality and education funds, build feasible online and offline mode, etc., can well solve the problems existing in the mixed teaching, makes the civil engineering professional education level improved significantly.

Keywords: Civil engineering teaching; Mixed teaching; The combination of online and offline

Introduction

Entering the information age, the reform of the education mode is in full swing. The civil engineering major needs a lot of modeling and quick calculation. Therefore, the teaching content should also pay attention to the combination of different teaching forms. This paper expounds the problems existing in the mixed online and offline teaching of civil engineering majors and the solutions to these problems, so that teaching institutions and teaching staff can refer to them, and strive to create a comprehensive and systematic online and offline teaching mode to provide new impetus for modern civil engineering education.

1. Problems existing in mixed online and offline teaching

First of all, when many schools try to combine online and offline teaching, they often lack a deep understanding of this new teaching mode, and may only one-sided believe that moving offline teaching content to online teaching is to realize mixed teaching, but do not really consider the characteristics and needs of online and offline teaching. This shallow integration not only can not give full play to the advantages of online and offline teaching, but also prevents students to systematically learn civil engineering knowledge due to the lack of clear positioning and goals, resulting in the situation of poor teaching effect.

Secondly, the mixed online and offline teaching mode puts forward higher requirements for teachers' teaching level. Teachers should not only have the traditional teaching ability, be good at grasping the pace of the classroom, clear teaching knowledge points, but also master the modern information technology, through online course design and network technology application, to achieve the accurate extraction of civil engineering curriculum content. However, there are still many teachers with obvious deficiencies in this aspect. Some of these teachers may be used to the traditional teaching methods and struggle to adapt to the new teaching process, resulting in the uneven quality of online teaching. Other teachers may not be familiar with information technology to make full use of it, or give full play to the advantages of online teaching, which also affects the teaching effect of civil engineering.

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2. Mixed online and offline teaching program can be implemented

2.1 Set up a professional team and customize teaching plans accurately

In order to ensure the smooth progress of mixed online and offline teaching, the school needs to set up a special management organization to be responsible for researching and formulating the integration of online and offline civil engineering knowledge content. This organization can be composed of teaching experts, information technology experts and managers to ensure that the program is scientific and feasible. Among them, teaching experts should conduct in-depth analysis of teaching objectives and teaching contents, make appropriate plans according to the learning needs and employment characteristics of students majoring in civil engineering, ensure the effective integration of online and offline teaching, and improve the teaching effect by formulating appropriate teaching plans and teaching methods. Information technology experts should also be responsible for the design and development of the online teaching platform to ensure the stability and ease of use of the platform, and constantly optimize the functions and interfaces of the platform according to teaching needs and feedback from teachers and students, so as to improve user satisfaction. In addition, managers should be responsible for coordinating resources from all parties to ensure the smooth progress of online and offline teaching, and work closely with teaching experts and information technology experts to jointly develop integration plans and supervise the implementation of the plans. Evaluate and adjust the integration scheme regularly, find problems and improve them according to the teaching effect and user feedback, pay attention to industry trends and education development trends in time, and constantly update the integration scheme to adapt to the changes in teaching needs.

2.2 Improve the teaching ability and pay attention to the overall quality of teachers

Teachers are one of the key factors of mixed online and offline teaching. In order to improve the teaching effect and the quality of talent training, schools should pay attention to the construction and training of teachers. First, schools can complement the team by recruiting excellent teachers with modern teaching concepts and information technology skills. These teachers should have a high teaching level and good information technology literacy, and be able to meet the needs of mixed online and offline teaching. We can also provide regular professional training and technical training for existing teachers, and invite industry experts and excellent teachers to give lectures or workshops to share teaching experiences and skills. In addition, they can organize teachers to attend online or offline training courses to improve their teaching skills and information technology skills. Most importantly, schools encourage teachers to carry out teaching innovation and practice. By setting up teaching innovation awards or providing other incentive mechanisms, schools can encourage teachers to try new teaching methods and means, and organize teachers to conduct teaching observation and evaluation activities, so as to promote the communication and cooperation among teachers^[2].

2.3 Invest capital injection to ensure that the model is feasible

In order to ensure the smooth progress of mixed online and offline teaching, schools need to increase the investment of special funds. The funds can be used to purchase and update hardware and software facilities such as online teaching platforms, multimedia

teaching equipment and network communication facilities, and conduct regular maintenance and upgrades to ensure their normal operation and meet teaching needs. Schools should make a detailed plan for the use of funds to ensure the effective use of funds, and rationally allocate funds for the purchase and maintenance of hardware and software facilities according to the teaching needs and facilities. Schools can also cooperate with relevant enterprises to jointly build practical teaching bases, so that these bases can provide students with practical opportunities and practical environment, and improve students' practical ability and professional quality. At the same time, enterprises can also obtain relevant resources and support through cooperation to achieve mutual benefit and win-win results. Schools should actively seek the support of the government and all sectors of society. By applying for special funds or policy support from the government, seeking donation or cooperation opportunities from all sectors of society, and raising funds through multiple channels, they can better guarantee the smooth progress of mixed online and offline teaching ^[3].

Conclusion

Civil engineering is a treasure in the field of architecture, which requires great educational efforts in cultivating talents. Our current online and offline mixed teaching mode there are still some problems, the civil engineering professional education mode is still in the exploration, only good at by means of technology, through the strict training of civil engineering practitioners, to build high-quality construction team, make the overall professional level in the field of construction, cultivate a batch of knowledgeable, knowledgeable civil engineering professionals, to the cause of socialism in our country.

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