Research on Improving Informational Teaching Ability of College Teachers

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Abstract

In the era of the Internet Plus, information technology is involved in all walks of life. Due to the increasing demand of students for knowledge, informational teaching is widely applied in higher education. It is fundamental to improve teachers' informational teaching ability. This study firstly elaborates the definition of informational teaching ability. Then, the necessity to improve teachers' informational teaching ability is expounded. Finally, the strategies to improve teachers' informational teaching ability are proposed. These strategies include four aspects. They are changing teaching concepts, carrying out diversified training, building software and hardware platform and developing scientific policies, which can provide a reference for college teachers.

Keywords

1. Introduction

With the development of information and technology, the Ministry of Education of the People's Republic of China has issued the "the Plan of Education Informatization Version 2.0 " to promote the construction of education modernization and education power[1], which has pointed out that teachers should recognize the important role of information and technology in cultivating innovative talents and improve their skills in information teaching. This plan aims to contribute to the application of information teaching and learning that covers all teachers and students. Therefore, it is important and urgent for college teachers to improve their informational teaching ability and young teachers should explore ways to promote the development of informational teaching.

2. The Definition of Informational Teaching Ability

Informational teaching ability is an all-around ability. Different studies have defined the meaning of informational teaching ability from different perspectives, e.g. Wang (2012) illustrated that teachers' informational teaching ability is the core ability of teachers' professional development in the informational society that integrates information and technology with teaching activities[2]; Tang (2015) concluded that informational teaching ability includes three aspects that is a professional ability, teaching ability, and the ability to integrate information and technology with teaching[3]. It can be seen that informational teaching ability includes teachers' ability to apply informational technology, the ability to design informational teaching, as well as the ability to construct and manage informational resource construction. To form a comprehensive informational teaching ability, improvements from various aspects are required.

3. The Necessity for Improving Informational Teaching Ability

3.1. The Need for Teaching Reform

Educational informatization is an effective way to achieve educational modernization and build a powerful educational country. Guided by the national policies and the requirements of schools, encouraging progress has been made to promote the informatization level of teachers. Nevertheless, many issues still need to be addressed. These issues mainly come from the following aspects: 1) the construction and application of informatization is at a low level; 2) teachers do not have an innovative of informational teaching; 3) the development level of informational teaching vary from region to region; 4) the teaching reform is going slowly. To build a powerful country in education, it is of great significance to enhance the ability of informational teaching, speed up the construction of informational environment, and integrate informational teaching resources.

3.2. The Need for Teachers' Personal Development

The Internet era is characterized by an "information explosion". Students can access various learning resources through the Internet, libraries, on-the-spot investigation, etc. therefore, teachers are at risk of being eliminated if they do not take the initiative to improve their self-quality and cannot recommend suitable learning resources for students. Teachers can promote themselves in many ways, including improving the ability to use informational equipment (e.g. electronic whiteboards, touch screen displays, and smart classroom equipment), improving the ability to build informational resources (e.g. micro-lessons, excellent lessons, and resource libraries), and improving the ability to design informational teaching (e.g. flipping the classroom and using informational tools to teach). Only when teachers' personal abilities are improved can they better meet the needs of students.

3.3. The Need for Cultivating Talents

Innovative talents are fundamental for the construction of an innovative country. As the guide of students' growth, teachers are expected to play an important role in shaping students. Students in the era of Internet plus are known as "Internet aborigines". To some extent, students are more capable of acquiring information than teachers. Therefore, teachers should be aware of this, recognize the impact of new technologies on the classroom and students, and try to improve their ability of informational teaching and change their ideology. Teachers should be good guides of students, helping students to discover and solve problems through independent inquiry and cooperative communication, consciously cultivating students' innovation and problem-solving skills.

4. Ways to Improve Teachers' Informational Teaching Ability

4.1. Changing the Mindset of Teaching

Teachers' mindset about informational teaching plays a decisive role in improving their informational teaching ability. The cultivation of students ultimately lies in teachers' teaching mindset. Even if the colleges provide perfect informational equipment and environment, it is hard to make progress in informational teaching if teachers are satisfied with the existing teaching mode and refuse to break the fixed thinking. Teachers should be aware of the revolutionary impact of information and technology on teaching. Many teachers only copy their courseware on a USB flash drive before the lessons, and cannot immediately carry out teaching once they suffer from equipment failure and file corrupted or get a computer virus. In contrast, teachers with informational awareness tend to back up their courseware through the Internet, email, etc., in case of emergency. At the same time, teachers should take the initiative to learn new technologies, cultivate the awareness of learning new technologies, and apply information

and technology for classroom teaching. They can apply Rain Classroom, Learning Pass, QQ groups, and other ways to assist teaching. Finally, teachers should continue to summarize in the process of using informational tools, which can contribute to finding a suitable teaching method to help students maximize improve their learning ability, stimulate students' learning initiative and enthusiasm, and give them a sense of accomplishment.

4.2. Carrying out Diversified Training

Carrying out training for teachers is an effective way to improve their informational teaching ability. The informational ability of teachers varies from person to person. Generally, young teachers and teachers in science and engineering are more capable of applying informational tools than older teachers and teachers in arts. Therefore, we should train them in accordance with their aptitude and level, and help them improve their informational ability with diversified training forms. Before the training, we should gain enough information about the teachers to understand the level of teachers' mastery of informational tools, and group them into three levels, i.e. basic level, advanced level and consolidated level. Then, Teachers with different levels should be trained separately, which can avoid teachers' fear of difficulty or contempt for training. In the training process, because teachers often need to complete many teaching or research tasks and usually have limited time to attend a training, it is necessary to take into account the actual situation of teachers and implement a combination of online and offline training methods. The online training can be conducted through live lectures, live video playback and online courses. The offline training can also be hold in a variety of ways, such as lectures, conducting a survey and being a visitor at a meeting. After the training, it is important to make efforts in teachers' practice, provide support in the process of teachers' teaching, fed back teachers' questions, and do a good job of tracking and support. Thus, the theoretical knowledge can be converted into practice, and eventually help improve teachers' informational teaching ability.

4.3. Building Software and Hardware Platform

The software and hardware supporting facilities are the foundation for teachers to improve their informational teaching ability. For building hardware facilities, the school should increase funding and replace the old equipment (e.g. projector and computer with long service life) to improve the informational teaching environment; In the process of reforming old equipment, we should do a comprehensive survey, by considering the needs of different disciplines and teachers, seeking the opinions of teachers, and investigating whether the new equipment is suitable for teachers' teaching. Meanwhile, we can visit other colleges and get the experience of informational construction from them. Then, we should build a scientific and reasonable information environment by repeatedly considering the actual situation of our college. For building the software platform, we should build a high-quality informational resource platform, and upload excellent courseware, micro class, classroom teaching and other resources to the platform. Teachers can learn from each other, learn the methods the other teachers use for teaching, and apply these methods in their own teaching. It is necessary to provide teachers with simple and convenient recording and broadcast software, by which the teachers can record courses by themselves when they have the needs and the recorded video can also be edited latterly. Meanwhile, teachers can make self-examination by watching the recorded video, and further improve the teaching.

4.4. Developing Scientific Policies

Scientific policies are the guarantee of the improvement of teachers' informational teaching ability. Colleges should provide policy support for teachers in a variety of ways. First of all, colleges should establish faultless evaluation mechanisms, set up evaluation expert panels, lay down scientific evaluation criteria. To stimulate teachers to actively use informational tools in

teaching, the assessment of teachers needs to include the assessment of their informational teaching ability. Secondly, the school should formulate scientific reward policies to encourage teachers to participate in informational teaching. For example, teachers can win awards through competitions, producing excellent informational resources, undertaking projects related to informational teaching. Finally, colleges should pay more attention to informational teaching and increase the investment in informational teaching. This can be implemented by organizing informational teaching competitions, such as micro lesson production, lesson presentation, informational resource construction, teaching skills competition. The excellent participants can be recommended to participate in provincial or national teaching competitions. In this way, the informational teaching ability is promoted. In addition, to promote the development of informational teaching, it is important to increase investment in informational teaching projects and let more teachers participate in the research of informational teaching.

5. Conclusion

In the era of the Internet Plus, information and technology have penetrated into all aspects of life and have an increasing impact on teaching. New teaching forms such as micro lessons, moody classes, flip classrooms, live broadcast classes are emerging. As the guide of students, teachers should attach enough attention to informational teaching, learn new technologies and new methods, and gain new ideas through various ways, so as to broaden their knowledge structure, improve their informational teaching ability and cultivate more innovative talents.

References

[1] Information on: http://www.ict.edu.cn/p/liaoning/tzgg/n2018050811145.html.

[2] W. J. Wang. Study on the development strategies of teachers' informational teaching ability, E-Education Research. 5 (2012), 103-109.

[3] W. J. Tang. On the role of informational teaching competition in promoting the ability of vocational education teachers, Chinese Vocational and Technical Education, 20 (2015), 52-55.