

A Study on the Path to Enhance the Informatization Teaching Ability of Normal University Students

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Keywords: Normal students; Information technology teaching ability; Development status; Cultivation strategy

Abstract: Information technology teaching is an important means of school education nowadays and an inevitable trend in the development of education. The corresponding information technology teaching ability is an important component of teacher professional development and also profoundly affects the quality of education and teaching. As the new force of future teachers, normal students should strive to improve their information technology teaching abilities in order to promote the development of educational informatization. This article conducts a survey on the information technology teaching ability of current normal university students, identifies the problems in the development of their information technology teaching ability, and proposes effective measures and strategies to help normal university students improve their information technology teaching ability.

1. Introduction

Information technology teaching refers to teaching in which teachers and students follow the guidance of modern teaching concepts, use information technology to assist, and apply modern educational methods[1]. From this, it can be seen that information technology teaching ability refers to the ability of teaching personnel to implement modern teaching concepts and reasonably apply information technology to the teaching process, thereby improving teaching effectiveness.

The relationship between information technology teaching and information technology education is the same as that between teaching and education. Teaching is the purpose of education, so information-based teaching is the core of information-based education. From the definition of information technology teaching ability[2], it is a mutual ability between educators and learners. In information technology teaching, teachers, with the help of information technology teaching media, organize diverse teaching activities and vividly present teaching content to students, in order to achieve the goal of improving teaching effectiveness. And students use information-based teaching software and hardware to carry out self-directed and cooperative learning, in order to promote their own development.

2. The problems in the development of information technology teaching ability among normal university students

In order to adapt to the new situation of information technology education, teacher trainees need to improve their information technology teaching abilities in order to meet the talent demand for information technology teaching abilities brought about by the rapid development of educational informatization. However, there are many problems in cultivating the information technology teaching ability of normal students in current Chinese universities, such as weak infrastructure, insufficient resource construction, lack of relevant technical personnel, etc., which are difficult to meet the development needs of educational informatization. Normal students themselves also have some problems, such as outdated educational concepts, insufficient mastery of relevant theories and technologies, and so on. Classify and summarize these issues, mainly manifested in the following aspects.

2.1 The educational concept of information-based teaching among teacher trainees is backward

The educational concept of information-based teaching for teacher trainees is their values towards the education industry and a reflection of their role as future "teachers". The educational philosophy guides and dominates the development of normal students in other fields, and is the most important internal factor affecting the professional development of normal students. If there is a lack of guidance from correct educational concepts, the development of information technology teaching ability of normal students is only a simple process of knowledge supplementation and repeated teaching. Over time, normal students only regard teaching as their own profession, and it is difficult to regard education as a lifelong goal[3].

2.2 Insufficient emphasis and investment in the construction of an information-based teaching environment in universities

Information technology teaching resources are the software guarantee for the development of information technology teaching abilities of teacher trainees. In the future teaching career, teacher trainees must rely on teaching resources to better carry out teaching activities. However, currently, although there are various types of resource service systems on the internet, there are very few high-quality and rich online resources related to promoting the professional development of normal students. In addition, when using information technology, normal students must have relevant professionals to assist in solving the problems and obstacles that exist during use. The construction of an information-based teaching environment is the hardware support for the development of information-based teaching abilities of normal students. Only in a good information-based teaching environment can normal students develop their own information-based teaching abilities well. The survey results also show that some universities have outdated information technology teaching infrastructure, which cannot meet the needs of the rapid development of information technology education.

2.3 Lack of policy support and guarantee mechanisms at the national level

Educational informatization is an inevitable trend in the development of education in China today, and it is also true worldwide. In recent years, countries around the world have accelerated the pace of developing information technology education. Some Western countries in North America and Europe have formulated and introduced a series of policies and systems to protect and support

the popularization of information-based teaching capabilities nationwide. In China, although the Ministry of Education has introduced a series of policies and mechanisms for teachers in basic education such as primary and secondary schools, no corresponding measures have been proposed for the development of information technology teaching abilities of normal university students. Normal students are like a source of fresh water, and improving their information technology teaching ability is fundamental[4]. Education is a whole formed by the interaction and organic integration of multiple systems. Normal students are the inheritors of basic education teachers and higher education teachers. If their information technology teaching ability cannot be effectively improved, it will inevitably fundamentally affect the development of basic education and even higher education. From a global perspective, there is a certain gap between our country and some Western countries such as Europe and America in terms of policy support, institutional protection, and economic investment.

3. Development Strategies for Informationization Teaching Ability of Normal University Students

3.1 Improve the theoretical understanding of information technology among teacher trainees

From a philosophical perspective, dialectical materialism tells us that the process of human understanding of things is from cognition to practice, and then to cognition. Cognition is the guidance and summary of practice, and it is the direction that guides practice. So, we need to enhance the theoretical understanding of information technology among teacher trainees in order to enhance their information technology teaching abilities.

(1) Update concepts

Normal students should not rely solely on chalk and blackboard teaching in future teaching activities, but fully utilize the three-dimensional and interactive information transmission of information technology, vivid and rich forms. Therefore, normal students must reject the previous teaching concept of "subject knowledge plus teaching knowledge" and establish a teaching concept under the situation of educational informatization. Although technology cannot replace the role of teachers, it will play a crucial role in the role of teachers in future teaching activities. To update the teaching concepts of normal students, they must actively strive for progress, constantly surpass themselves, and keep up with the pace of the times. Schools and society should provide more environmental support. Under the subtle influence of the information technology teaching environment, the information technology teaching concept of normal students will inevitably be improved.

(2) Enhancing awareness

Firstly, teachers must master various advanced theories and related technologies to guide their teaching. Secondly, in order to smoothly carry out information technology teaching activities, teachers must improve their proficiency in operating various multimedia devices. Finally, teachers should periodically reflect on their teaching process and consider the issues within it. The information technology awareness of teacher trainees is specifically reflected in their ability to actively learn information technology and independently use it to organize and improve teaching activities. In order to achieve this goal, teachers themselves must strive to demonstrate their strengths and frequently and appropriately apply information technology to teaching activities, so that normal students can feel firsthand how important it is to apply information technology to curriculum teaching, and then realize the necessity of improving their own information-based teaching ability, laying a solid foundation for improving the quality and effectiveness of education and teaching.

3.2 Strengthen the learning of basic theories of information technology among teacher trainees

Practice must be guided by correct theories in order to develop healthily. Therefore, in order to substantially improve the information technology teaching ability of normal students, we first need to strengthen their learning of the basic theories of information technology. Information technology education is not only the application of modern educational technology, but also accompanied by profound changes in the fields of education and teaching. Change requires the guidance of advanced theories to achieve the best results.

3.3 Policy support and institutional guarantee

The country and schools should formulate a series of educational policies and regulations to encourage, support, and guide normal students to develop their own information technology teaching abilities.

Encouraging policies and systems are the external driving force for promoting the development of information technology teaching abilities among normal students, so it is necessary to develop sound policy mechanisms to encourage normal students. When formulating policies, both the state and schools should consider multiple aspects. At the national level, the national education regulatory department should establish a standard and policy for the professional development of teacher trainees. Each university should formulate a teacher professional development path that is consistent with the actual situation of teacher trainees, use policy mechanisms to encourage teacher trainees to engage in professional development, and guide them to conduct research on educational and teaching reform. Building an open, flexible, and suitable teacher development system for normal university students requires coordination among universities, specialized training institutions, teacher professional development network platforms, and research institutions to jointly provide convenient conditions for the development of teachers. Schools should also develop policies and systems corresponding to the national level, such as building a diversified information technology teaching evaluation system to encourage the development of information technology teaching abilities among normal students[5].

3.4 Construction of information technology teaching resources and environment in universities

(1) Hardware resources

Universities should increase their efforts and investment in the construction of information technology teaching infrastructure, update outdated infrastructure in real time, and create a favorable environment for normal students to develop their own information technology teaching abilities. Specifically, updating multimedia teaching equipment includes replacing optical projectors with electronic projectors, replacing computers with picture tube displays in school computer rooms, upgrading various information technology teaching software, introducing new types of multimedia teaching equipment, and so on.

(2) Software resources

While the infrastructure construction is sound, the development of online education resources cannot fall behind. Schools should provide a network resource service system tailored to the information technology teaching ability of teacher trainees to promote the development of their information technology teaching ability. In addition, the professional growth of teacher trainees cannot be separated from the guidance of an expert team. Normal students need the support of software and hardware resources while applying them to improve their information technology

teaching abilities. At the same time, they also need relevant technical personnel to guide them in using these software and hardware resources. Therefore, it is necessary to create a team of information technology education talents.

4. Conclusion

The rapid development of science and technology has challenged some traditional professional positions. Although it may not completely replace traditional professions, it will inevitably have a profound impact on relevant practitioners. From the perspective of normal students themselves, if they do not improve their information technology teaching abilities, they will find it difficult to adapt to the new situation of educational information development and will inevitably be eliminated by teachers with high information technology teaching abilities. From a non self factor perspective, schools and various sectors of society should attach sufficient importance to the development of information technology teaching abilities among normal university students. There are many problems in the development of information technology teaching ability among normal university students. We must analyze and study these issues, explore corresponding solutions, in order to better promote the improvement of information technology teaching ability of normal students.

Acknowledgements

Supported by Shaanxi Teacher Development Research Program Project (No.:2023JSZ009); Shaanxi Teacher Education Reform and Teacher Development Research Project (No.: SJS2023ZD024); 2023 Project of Shaanxi Province's 14th Five-Year Plan for Education and Science (No.:SGH23Y2619); The Ministry of Education's Industry University Research Collaborative Education Project (No.: 230702205195605).

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