Research on Strategies for Cultivating Informationization Teaching Abilities of Normal College Students in the Internet Era

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Abstract: The information technology teaching ability of normal university students directly affects the future education level, which is crucial for educational reform. However, the current cultivation of information technology teaching abilities among normal university students faces problems such as a focus on theory over practice, a lack of high-quality teaching resources, and a single learning evaluation standard. In response to these issues, universities must increase practical information technology teaching courses, ensure the supply of information resources for teacher trainees, and develop a diversified learning evaluation index system to balance theoretical learning and practical skills effectively. This can also enrich teaching resources, establish a comprehensive evaluation system, and comprehensively enhance the information technology teaching ability of normal students.

Keywords: Internet Era; Normal College Students; Information Technology Teaching Ability; Culture

1. Introduction

As an important component of the future teaching team, the information technology teaching ability of teacher trainees directly affects the improvement of the school education level. Cultivating the information technology teaching ability of teacher trainees not only helps with educational reform, but also is an inevitable choice to meet the educational needs of the Internet era. However, there are still many problems in the current practice of cultivating the information technology teaching ability of normal college students. For example, some normal university students have insufficient understanding of information technology teaching, weak information technology operation ability, lack effective information technology teaching design ability, and insufficient systematic information technology teaching team construction. These issues seriously affect the quality and effectiveness of cultivating information technology teaching abilities. Therefore, how to find and utilize development opportunities in the current internet environment, solve key problems in the process of cultivating information technology abilities of teacher trainees, has become a practical direction to enhance their information technology teaching abilities.

2. The Problems Facing the Cultivation of Information Technology Teaching Ability Among Current Normal University Students

2.1 The Training Process Emphasizes Theory Over Practice

In the current higher education system, the cultivation of information technology teaching ability for teacher trainees places more emphasis on theoretical knowledge than on practical skills. This phenomenon is particularly evident in curriculum design and teaching methods. Many normal universities have invested a significant amount of energy into the theoretical exploration of information-based teaching in their curriculum arrangements. For example, the conceptual framework of digital education technology, the theoretical background of online learning platforms, and the theoretical foundation of educational software. However, the teaching of these theoretical knowledge has not been combined with practical applications, resulting in limited abilities for students to master specific operational skills and practical applications. [1] This has a direct impact on the ability of teacher trainees to develop and cope with the modern educational environment.

2.2 Lack of High-Quality Teaching Resources

In the process of cultivating the information technology teaching ability of normal university students, the lack of high-quality information technology teaching resources has become a significant problem. Firstly, high-quality teaching content resources are scarce. In the era of informatization, teaching content is not only traditional textbook knowledge, but also includes multimedia, interactive learning tools, and online courses. High quality teaching content resources should be rich, diverse, and up-to-date, which can stimulate students' interest in learning and promote deep thinking. However, in reality, many normal universities have shortcomings in this area and are unable to provide sufficient and high-quality teaching resources. This makes it difficult for normal college students to be exposed to the latest teaching concepts and methods in their learning and practical processes, and to effectively cultivate and enhance their information technology teaching abilities.

Secondly, the scarcity of high-quality information-based teaching platforms is also a prominent issue. In the digital teaching environment, teaching platforms are not only tools for transmitting knowledge, but also important places for teachers and students to interact and cooperate in learning. An excellent information-based teaching platform should have a good user experience, powerful functions, and a stable operating environment. However, the current situation faced by many universities is that the number of teaching platforms that can be used is limited, and these platforms often cannot fully meet teaching needs in terms of functionality and experience. This limits the ability of teacher trainees to apply information technology in practical teaching, making it difficult for them to effectively design and implement information technology teaching activities. [2] Finally, the lack of teacher training and guidance resources is also an important factor affecting the cultivation of information technology teaching abilities among normal college students. The professional development of teachers is an ongoing process that requires regular training and effective guidance. However, in many universities, there is a relative lack of teacher training and professional development guidance for information technology teaching. This not only affects the cultivation of information technology teaching ability among normal school students, but also has an impact on young teachers who have entered the education industry. Due to the lack of necessary training and guidance, even teachers who aspire to adopt information-based teaching may not be able to effectively utilize relevant technologies and teaching methods due to unfamiliarity.

2.3 The Criteria for Learning Evaluation are Single

In the process of cultivating the information technology teaching ability of normal college students, the problem of single learning evaluation standards is particularly prominent. In the field of information technology teaching, teacher trainees not only need to understand traditional teaching concepts, but also need to master and apply various modern technologies. The evaluation system cannot fully cover these fields, and the information technology teaching ability of normal students cannot be fully developed. However, the current evaluation system mainly focuses on mastering traditional educational theories, and the evaluation of information technology teaching skills appears insufficient. This biased evaluation method overlooks the key skills of information-based teaching, such as the use of digital tools, the design of online courses, and interactive teaching achieved through technology. This leads to teacher trainees not fully realizing the important role of information-based teaching in contemporary education.

The current learning evaluation system also lacks consideration for diversity and flexibility in the information-based teaching environment. In the constantly changing environment of technology, teachers need to be able to flexibly adapt to new tools and teaching methods. However, the current evaluation criteria are too fixed and traditional, which limits the flexibility and ability of teacher trainees to adapt to new technologies. This is not conducive to the development of their ability to cope with the challenges of information-based teaching. [3]

Strategies for Cultivating Informationization Teaching Abilities of Normal College Students in the Internet Era

3.1 To Increase Practical Information

Technology Teaching Courses

In the Internet era, the cultivation of information technology teaching ability for normal college students must include information related courses. By expanding and deepening the course content related to information technology, we aim to enhance the information technology application ability and innovative teaching ability of teacher trainees.

Firstly, universities should strengthen basic courses related to information technology, such as computer science fundamentals, data processing, digital media production, etc. This type of course helps teacher trainees become familiar with common information technology tools and concepts, while also cultivating their ability to solve problems and apply technology. For example, basic computer science courses can teach programming and algorithm design, which helps teacher trainees understand the working principles of computer systems. The data processing course can teach data analysis and statistical methods, providing assistance for teacher training students to use data to support decision-making in the field of education. In addition, digital media production courses can cultivate the multimedia teaching design ability of teacher trainees, enabling them to create educational resources that attract students' attention.

Secondly, universities should offer more advanced courses related to educational technology integration. The integration of educational technology is the core of information-based teaching. Therefore, universities need to provide relevant training for teacher trainees to help them effectively apply technology in practical teaching. Universities should offer more advanced courses related to the integration of educational technology, teaching students how to integrate information technology into classroom teaching and how to optimize teaching design using digital resources. [4] Through these advanced courses, teacher trainees can learn how to choose appropriate educational technology tools and platforms, as well as how to seamlessly integrate these tools in teaching.

Once again, the establishment of interdisciplinary courses is also very important. Interdisciplinary courses combining education, psychology, and information technology can help teacher trainees understand the role of technology in education and explore how to effectively integrate technology into teaching in different disciplines. As a result, teachers can better design educational technology tools and teaching strategies. Through this interdisciplinary learning, teacher trainees can organically combine knowledge and skills from different fields, thereby gaining a more comprehensive understanding of the application of information technology in education.

In addition, practical projects and internships are also crucial. Practice is the best way to consolidate and apply knowledge. Universities should encourage students to participate in real-life teaching projects or conduct information-based teaching internships in the school environment. By applying the theoretical knowledge learned in the classroom to practical teaching, we can gain a deeper understanding and mastery of these skills. Practical projects and internships can also provide opportunities for teacher trainees to collaborate with education professionals, establish career networks, and prepare students for their future educational careers. Through practical teaching experience, teacher trainees can better understand the application of educational technology in practical teaching and how to effectively respond to educational challenges.

Finally, regular seminars and workshops are also important means of cultivating information technology teaching abilities. These activities should cover various topics from the latest trends in educational technology to teaching case analysis. Normal students can exchange experiences with other education practitioners in these activities, gain new ideas and inspiration, and thus understand the latest developments in information technology and teaching methods. Then, students can constantly update their knowledge, and improve their information technology teaching abilities.

In short, by adding information courses, combining theoretical learning and practical application, as well as providing interdisciplinary learning opportunities and professional development activities, the information technology teaching ability of teacher trainees can be effectively improved. Furthermore, it cultivates more innovative and adaptable education professionals.

3.2 To Ensure the Supply of Information Resources for Teacher Trainees

In the context of digitalization, the roles and responsibilities of teachers have undergone significant changes. They not only need to be proficient in traditional teaching methods, but also must be proficient in various information technologies and network resources to meet the needs of modern education. Therefore, higher education institutions should provide abundant educational technology resources, such as professional teaching software, online learning platforms, e-books and databases, multimedia production tools, etc. This can help teacher trainees gain a deeper understanding of the latest trends in educational technology, enabling them to keep up with technological developments and inspiring their enthusiasm and motivation for innovative teaching methods. Normal students should strengthen their learning in order to flexibly apply these technical tools in the actual educational environment, improve the quality of education, and enhance the learning experience of students.

At the same time, universities should also build resource sharing platforms that are easy for normal students to access and utilize. The platform should include open-source textbooks, online courses, teaching cases, discussion forums, etc., to facilitate teacher trainees in obtaining the necessary information and materials. Universities should encourage normal students to actively participate in this resource sharing platform, sharing their teaching experience and creativity. This resource sharing mechanism helps to form a mutual learning community, promote extensive exchange of knowledge and experience, and thereby improve the efficiency of using teaching resources. Normal students can draw inspiration from the experiences of other peers and jointly explore methods to solve educational problems.

In addition, universities should regularly hold lectures and training activities to assist normal students in gaining a deeper understanding and application of these information resources. These activities should be led by experienced teachers or professionals, providing technical training while sharing practical teaching application cases. [5] By participating in such interactive learning, teacher trainees can gain inspiration and innovative teaching concepts, better transform theoretical knowledge into practical operations, and prepare for future educational work.

Finally, universities should also encourage normal students to actively participate in the development and maintenance of information resources. Through course projects, internship opportunities, or research activities, teacher trainees can personally experience the process of resource creation and optimization. It aims to enhance the understanding and mastery of educational technology among teacher trainees. This can make them more confident in meeting the technological needs of modern education and provide students with a richer learning experience.

By providing abundant educational technology resources, building resource sharing platforms, holding lectures and training activities, and encouraging normal students to actively participate in resource development and maintenance, universities can effectively help normal students better understand, master, and apply educational technology. This helps normal students adapt to the needs of modern education. This also helps to improve the quality of higher education, cultivate more competitive education professionals, and contribute to the future education cause.

3.3 To Develop a Diversified Learning Evaluation Index System

Although traditional teaching evaluation methods, such as written exams and academic papers, can effectively assess students' theoretical knowledge and academic level. However, the role of these methods in evaluating the practical ability of information technology teaching is limited. Therefore, universities should establish a comprehensive evaluation system that not only evaluates their knowledge and skills, but also considers their application ability, innovative thinking, and personal growth potential in the actual teaching environment.

Firstly, a diversified evaluation system should include an evaluation of the performance of teacher trainees in information-based teaching practices. In this digital age, the informatization of education has become an irreversible trend. Normal students must have the ability to use information technology for teaching design and implementation, such as using digital media tools to present teaching content, using online

collaboration platforms to promote student interaction, and using virtual classrooms and other technologies for efficient teaching. Universities should focus on the practical operational abilities of teacher trainees in these areas through simulation or internship teaching. This practice based evaluation method can help teacher trainees transform theoretical knowledge into practical teaching skills, promoting their in-depth understanding of the application of information technology in teaching.

Secondly, a diversified evaluation system should also consider the innovative ability and critical thinking of teacher trainees. Universities should encourage normal students to try new teaching methods and technologies, and learn to analyze the advantages and disadvantages of these methods and technologies from a critical perspective. The evaluation system should no longer be limited to traditional teaching skills and knowledge mastery, but should include an evaluation of the teaching innovation and reflective ability of teacher trainees. Universities should evaluate the innovation and practicality of their teaching plans, as well as their reflection and evaluation of their teaching practices. This stimulates the creative thinking of teacher trainees and helps them maintain competitiveness in a rapidly changing educational environment.

Finally, the diversified evaluation system should also reflect support for the personal growth and career planning of teacher trainees. Evaluation should not only focus on the current teaching ability of teacher trainees, but also cover their potential growth ability and future career goals. [6] The evaluation system needs to consider personal career development plans, the establishment of teaching philosophy, and other aspects. Through such evaluation, teacher trainees can gain a deeper understanding of their teaching style and career development path, thereby formulating more effective personal growth and career development plans.

In short, a comprehensive and diversified teacher training evaluation system is crucial for teacher trainees. It not only involves the performance of teacher trainees in information technology teaching practice, but also includes their innovative ability, critical thinking, personal growth, and career planning. With the help of such a diversified learning evaluation index system, universities can more comprehensively evaluate and support the development of information technology teaching abilities among normal students. Thus, while effectively improving teaching quality and educational effectiveness, it provides solid support for the personal growth and career development of teacher trainees.

4. Conclusion

The cultivation of information technology teaching ability among normal university students is particularly important in the Internet era. Faced with challenges such as the imbalance between theory and practice, lack of resources, and single evaluation standards, enhancing practical teaching, ensuring resource supply, and constructing a diversified evaluation system provide effective ways to solve these problems. These strategies not only enhance the information technology teaching ability of normal university students, but also promote their development of innovative thinking and problem-solving abilities, thereby preparing them for teaching challenges in future educational environments. In addition, this will also help improve the quality of education and promote the modernization process of education.

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