

Exploration on the Cultivation Mode of Informatization Teaching Ability of Newly Recruited Teachers in Application-oriented Private Undergraduate Colleges and Universities—Taking Yinchuan University of Energy as an Example

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Abstract: Taking Yinchuan University of Energy as an example, this paper delves into the cultivation mode of informatization teaching ability for newly recruited teachers in application-oriented private undergraduate colleges and universities. With the rapid development of information technology, educational informatization has become a vital approach to improving teaching quality and promoting educational modernization. In response to the common challenge faced by newly recruited teachers, namely insufficient informatization teaching ability, this paper first analyzes the current status and challenges of the informatization teaching environment. Subsequently, based on the specific practices of Yinchuan University of Energy, it proposes a multi-dimensional and multi-level cultivation strategy that encompasses theoretical training, technical hands-on practice, case studies, teaching observation and reflection, as well as school-enterprise cooperation. By constructing a systematic training system, this paper aims to strengthen newly recruited teachers' awareness of information technology application, enhance their abilities in instructional design, teaching resource integration, online teaching platform operation, and the construction of blended teaching models. Ultimately, this approach seeks to provide robust support for newly recruited teachers to rapidly adapt to and effectively utilize informatization teaching methods, thereby driving the overall improvement of teaching quality and furthering the in-depth development of educational informatization at the college.

1. Introduction

With the rapid development and extensive application of information technology in the field of education, educational informatization has emerged as a pivotal force in enhancing teaching quality and promoting educational modernization. Under the new era background, application-oriented private undergraduate colleges and universities are confronted with the significant task of teaching reform, and the improvement of newly recruited teachers' informatization teaching ability, as the nascent force in teaching, is of particular importance. This paper aims to explore how application-oriented private undergraduate colleges and universities can effectively cultivate the informatization teaching ability of newly recruited teachers. By analyzing the current status and challenges of the informatization teaching environment, combined with specific cases, this paper proposes practical cultivation strategies, with the goal of providing robust support for enhancing teaching quality and advancing the process of educational informatization.

2. Literature Review and Theoretical Basis

2.1 Current Research Status of Informatization Teaching Ability at Home and Abroad

1) Definition and Connotation of Informatization Teaching Ability

Informatization teaching ability refers to the capability of teachers to conduct teaching activities and achieve teaching objectives using modern information technology tools in an information

technology environment. It encompasses multiple aspects, such as teachers' mastery of information technology, their ability to integrate teaching resources, their innovative capacity in instructional design, and their proficiency in utilizing information technology to facilitate student learning. The informatization teaching ability represents not only the enhancement of individual skills for teachers but also a profound transformation of teaching philosophies and models.

2) Overview and Comparative Analysis of Relevant Research at Home and Abroad

Research on informatization teaching ability is showing an increasing trend both domestically and internationally. Foreign research started earlier, emphasizing the integration of theory and practice, and highlighting the deep integration and innovative application of information technology in teaching. Its research scope is broad, covering teachers' information technology literacy, digital teaching resource development, exploration of blended teaching models, etc. In contrast, domestic research, though starting later, has developed rapidly, particularly under the impetus of educational informatization policies. The focus has gradually shifted from infrastructure construction to application practice, with attention paid to strategies for enhancing teachers' informatization teaching ability, effect evaluation, and influencing factors. While domestic and foreign research differ in their theoretical frameworks, methodologies, and practical applications, they both underscore the importance of informatization teaching ability in improving teaching quality and promoting the all-round development of students.

2.2 Theoretical Basis

1) Educational Technology-Related Theories

Educational technology is a discipline that studies the theory and practice of technology application in the educational process. It provides a rich theoretical framework, including learning theories, communication theories, systems theories, among others, which serves as a solid theoretical foundation for the cultivation of informatization teaching ability. Educational technology emphasizes the educational application of technology and focuses on optimizing teaching processes and enhancing teaching effectiveness through modern information technology tools. In the study of informatization teaching ability, educational technology-related theories assist teachers in understanding how technology impacts teaching and guide them in effectively integrating information technology into teaching practice.

2) Teacher Professional Development Theory

Teacher professional development theory is a theoretical system that examines the professional growth and capability enhancement of teachers. It views teacher professional development as a continuous process involving advancements in knowledge, skills, attitudes, and other dimensions. In the context of informatization teaching ability development, teacher professional development theory emphasizes the importance of teachers' ability to engage in continuous learning, continuously updating their knowledge structures and teaching philosophies to meet the evolving demands of educational informatization. Additionally, this theory highlights the interplay between teachers' personal growth and teaching practice, encouraging teachers to foster their professional competence through reflection, collaboration, and communication.

3) Learning Theories and Instructional Design Theories

Learning theories and instructional design theories are indispensable theoretical foundations in the context of educational informatization. Learning theories delve into the nature, processes, and influencing factors of human learning, providing a scientific basis for instructional design. In the development of informatization teaching ability, learning theories help teachers comprehend students' learning needs and learning styles, guiding them in designing teaching activities and resources that align with students' cognitive patterns. Meanwhile, instructional design theories focus on utilizing systematic approaches to plan teaching processes, aiming to optimize teaching objectives. By applying instructional design theories, teachers can more scientifically and reasonably arrange teaching activities, enhancing teaching effectiveness and learners' satisfaction.

3. Current Status and Challenges of Informatization Teaching Environment

3.1 Construction and Development of Informatization Teaching Environment

1) Informationization Teaching Infrastructure Construction

The construction of an informatization teaching environment first relies on comprehensive infrastructure. This encompasses a high-speed and stable campus network, widely covered wireless network access points, high-performance teaching computers and multimedia equipment, as well as intelligent teaching management systems. These infrastructures provide the necessary material conditions for informatization teaching, enabling teachers to conveniently access and utilize information technology resources to carry out diverse teaching activities. With the continuous advancement of technology, the construction of informatization teaching infrastructure is also being continuously optimized and upgraded to meet the demands of educational modernization^[1].

2) Current Status of Online Teaching Platforms and Resource Utilization

As an essential carrier of informatization teaching, online teaching platforms have been widely applied in education at all levels. These platforms offer functions such as course management, online teaching, homework submission and grading, learning progress tracking, and also integrate abundant digital teaching resources like electronic textbooks, multimedia courseware, and online question banks. Through online teaching platforms, teachers can implement remote teaching, blended learning, and other teaching modes, enhancing teaching flexibility and efficiency. Meanwhile, students can choose their learning time and place more autonomously, achieving personalized learning. Nevertheless, effectively integrating and utilizing these online resources to improve teaching outcomes remains a significant challenge in current informatization teaching.

3.2 Challenges Faced by Newly-Hired Teachers in Informatization Teaching Capability

1) Lack of Awareness in Applying Information Technology

Newly-hired teachers often lack sufficient understanding of the crucial role of information technology in teaching, resulting in a lack of initiative and motivation to actively apply it. They may be accustomed to traditional teaching methods and hold a wait-and-see or resistant attitude towards new technologies, making it difficult for them to effectively enhance their informatization teaching capabilities. Therefore, fostering their awareness of applying information technology and recognizing its importance in improving teaching quality and efficiency is the primary task in enhancing their informatization teaching capabilities.

2) Insufficient Teaching Design and Resource Integration Skills

Informatization teaching requires teachers to possess advanced teaching design and resource integration skills. However, newly-hired teachers often fall short in these areas. They may struggle to effectively integrate information technology with course content and design teaching activities that align with students' cognitive patterns. They may also be inadequate at selecting and integrating various teaching resources, resulting in a lack of pertinence and effectiveness in teaching content. Therefore, strengthening their training in teaching design and resource integration skills is a vital approach to enhancing their informatization teaching capabilities^[2].

3) Unfamiliarity with Online Teaching Platforms

Online teaching platforms are essential tools for informatization teaching, but newly-hired teachers often lack proficiency in their operation. They may be unfamiliar with the various functions and usage methods of the platforms, leading to operational errors or inefficiencies during teaching. Therefore, providing specialized training on online teaching platforms for newly-hired teachers to help them master their usage is a necessary measure to improve their informatization teaching capabilities.

4) Difficulties in Constructing Blended Learning Models

Blended learning, a combination of traditional face-to-face teaching and online teaching, poses numerous challenges for newly-hired teachers. They may find it difficult to grasp the strengths, weaknesses, and applicable scenarios of both teaching modes, resulting in unreasonable teaching designs or suboptimal implementation effects. Thus, strengthening their theoretical learning and practical exploration of blended learning models, helping them grasp the methods and techniques

for constructing such models, is crucial to enhancing their informatization teaching capabilities.

4. Practice of Cultivating Informatization Teaching Capabilities of Newly-Hired Teachers at Yinchuan University of Energy

4.1 Overview of the College and the Background of Informatization Teaching

As an applied private undergraduate institution, Yinchuan University of Energy is dedicated to cultivating high-quality and applied talents who can meet the needs of social development. In recent years, with the rapid development of information technology and the in-depth promotion of education informatization, the college has attached great importance to the construction and application of informatization teaching environments. The college has not only invested a significant amount of funds in improving informatization teaching infrastructure but also actively introduced and promoted advanced online teaching platforms and digital teaching resources, providing teachers and students with excellent informatization teaching environments. Against this backdrop, how to effectively enhance the informatization teaching capabilities of newly-hired teachers has become a crucial topic for the college's teaching reform and development^[3].

4.2 Construction and Implementation of the Cultivation Model

In response to the inadequacy of newly-hired teachers' informatization teaching capabilities, Yinchuan University of Energy has constructed a multi-dimensional and multi-level cultivation model. This model encompasses various aspects such as theoretical training, technical practice, case studies, teaching observation and reflection, and school-enterprise cooperation. Firstly, through systematic theoretical training, newly-hired teachers are helped to establish informatization teaching concepts and master the principles and methods of applying information technology in education. Secondly, technical practice training is provided to enhance teachers' information technology application abilities and teaching resource integration capabilities. Meanwhile, case study activities are organized to share successful teaching cases and experiences, promoting exchanges and learning among teachers. Furthermore, the college encourages newly-hired teachers to observe teaching, learn advanced teaching methods and techniques from outstanding teachers, and reflect and summarize based on their own teaching practices. Lastly, the college actively collaborates with enterprises to introduce corporate resources and technical support, providing newly-hired teachers with more practical opportunities and platforms. Through the implementation of these measures, the informatization teaching capabilities of newly-hired teachers have been effectively enhanced.

4.3 Evaluation and Feedback on Cultivation Effects

To ensure the effectiveness and relevance of the cultivation model, Yinchuan University of Energy has established a comprehensive evaluation and feedback mechanism for cultivation effects. The college conducts regular teaching inspections, student evaluations of teaching, peer evaluations, and other methods to comprehensively assess the informatization teaching capabilities of newly-hired teachers. The evaluation results are not only used as an important basis for teachers' individual performance appraisals but also guide the improvement and optimization of subsequent cultivation efforts. At the same time, the college encourages newly-hired teachers to actively participate in the evaluation process, offering their opinions and suggestions to better meet their individualized development needs. Through the organic integration of evaluation and feedback, the college continuously adjusts and improves the cultivation model, ensuring the continuous enhancement of newly-hired teachers' informatization teaching capabilities.

5. Discussion and Implications

5.1 Analysis of the Effectiveness of the Cultivation Model

The cultivation model for enhancing newly-hired teachers' informatization teaching capabilities demonstrates its effectiveness in multiple aspects. Firstly, by combining systematic theoretical

training with practical operations, newly-hired teachers can rapidly grasp the fundamental concepts and technological tools of informatization teaching, significantly enhancing their technical application abilities and instructional design skills. Secondly, the introduction of case studies and teaching observations provides invaluable learning and exchange opportunities for these teachers, fostering experience sharing and mutual inspiration among them, which contributes to the formation of a positive atmosphere of common progress. Furthermore, the deepening of school-enterprise cooperation not only offers more practical platforms for newly-hired teachers but also enables them to gain a more direct understanding of industry demands and technological frontiers, thereby enabling them to more precisely orient their teaching directions and goals. In summary, this cultivation model has exhibited remarkable effectiveness in upgrading the informatization teaching capabilities of newly-hired teachers^[4].

5.2 Existing Issues and Suggestions for Improvement

Despite the positive outcomes of the cultivation model, there are still some issues that cannot be overlooked. Firstly, some newly-hired teachers still exhibit fear and reluctance towards informatization teaching, lacking sufficient confidence and motivation to actively explore and practice. To address this issue, it is recommended that the college further strengthen psychological counseling and incentive mechanisms, helping teachers build confidence and unleash their potential. Secondly, some teachers struggle with resource integration and instructional design, finding it difficult to deeply integrate information technology with course content. To this end, the college should intensify training efforts, providing more teaching cases and practical guidance to assist teachers in enhancing their resource integration and instructional design abilities. Additionally, as technology continually evolves, the cultivation model also needs to keep pace, continually updating and refining training content and methods to adapt to the latest requirements of informatization teaching.

5.3 Implications and Inspirations for Other Institutions

Yinchuan University of Energy's exploration and practice in enhancing newly-hired teachers' informatization teaching capabilities provide valuable insights and references for other institutions. Firstly, emphasizing the construction and application of informatization teaching environments is the prerequisite and foundation for upgrading teachers' informatization teaching capabilities. Institutions should increase investment, improve informatization teaching infrastructure, and provide teachers with a favorable teaching environment. Secondly, constructing a scientific and reasonable cultivation model is crucial. Institutions should develop targeted training plans based on their actual situations and teachers' development needs, focusing on a combination of theory and practice, as well as in-campus and off-campus training methods. Thirdly, establishing an effective evaluation and feedback mechanism is an important means to guarantee the effectiveness of training. Institutions should establish a sound evaluation system, regularly assessing and providing feedback on teachers' informatization teaching capabilities, to facilitate timely adjustments and improvements to training plans. Lastly, strengthening school-enterprise cooperation is a vital path to promoting the enhancement of teachers' informatization teaching capabilities. Institutions should actively collaborate with enterprises, introducing corporate resources and technological support to provide teachers with more practical opportunities and platforms^[5].

6. Conclusion

In summary, this study has conducted a thorough exploration into the cultivation of newly-hired teachers' informatization teaching capabilities. By constructing an effective cultivation model, evaluating its effects, and proposing suggestions for improvement, this study has provided robust support for the professional development of newly-hired teachers. The research conclusions indicate that a systematic cultivation model and diversified teaching resources are crucial for enhancing teachers' informatization teaching capabilities. Looking ahead, as educational informatization continues to advance, the cultivation of newly-hired teachers' informatization teaching capabilities

will face more challenges and opportunities. Therefore, we need to keep abreast of technological trends, continually innovate cultivation models, and strengthen school-enterprise cooperation, with the aim of providing newly-hired teachers with more comprehensive and efficient support, helping them grow into outstanding teachers who can meet the educational demands of the new era.

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