



Research on Teaching Management Strategies in Universities under the Internet Background

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Abstract: In the digital era, the swift advancement of internet technology has profoundly influenced the administrative paradigms of higher education institutions, compelling traditional teaching management models to undergo comprehensive reform. This study aims to investigate innovative strategies for university teaching management in the context of Internet technology, thereby enhancing teaching quality and administrative efficiency, and providing theoretical and practical support for the sustainable development of higher education. Initially, this research examines the limitations of conventional teaching management models, the transformation requirements for university teaching administration, and the importance and practical significance of this study. Subsequently, through a literature review, it analyzes the significant changes brought about by internet technology to university teaching management and explores the advantages of such management under the influence of the internet. Finally, it proposes an innovative and practical pathway for teaching management strategies in the Internet age. The significance of this research lies in its provision of a theoretical framework and practical guidance for the innovation of teaching management in universities. Research findings indicate that the judicious application of Internet technology can not only effectively address the challenges inherent in traditional management but also foster a new, student-centered teaching management model, offering crucial insights for achieving high-quality development in higher education during the process of digital transformation.

Keywords: Internet, university, teaching management, strategies

1. Introduction

With the accelerated pace of global informatization, internet technologies have penetrated various sectors of society, exerting particularly profound impacts on the education industry. As a central hub for knowledge innovation and talent cultivation, universities are confronting numerous limitations of traditional teaching management models and the profound transformations brought about by the rapid development of information technology. Against this backdrop, university teaching management is gradually transitioning towards digitization and intelligence, offering new opportunities for improving efficiency and optimizing teaching quality in higher education institutions.

1.1 Limitations of Traditional Teaching Management Models

Traditional teaching management models, predominantly offline, suffer from low management efficiency, uneven resource allocation, and delayed communication of information. In a low-informatization environment, students' needs often fail to reach teaching management levels promptly, and course resources are challenging to allocate on a personalized basis. Moreover, as student populations grow, traditional teaching management models struggle to meet the increasing demands for improved educational quality and efficiency under new circumstances.

1.2 The Need for Transformation in University Teaching Management

Driven by internet technologies, university teaching management is shifting from a "teacher-centered" approach to a "student-centered" paradigm. Modern educational philosophies emphasize that teaching should aim at students' comprehensive development, and internet technologies play a crucial role in achieving this goal. For example, through online learning platforms and learning management systems, universities can analyze students' learning behaviors using data, enabling educators to formulate more scientific and tailored teaching plans.

1.3 Significance and Practical Implications of the Research

Optimizing university teaching management in the context of internet technologies not only enhances management efficiency but also promotes the equitable distribution of educational resources, providing students with higher-quality learning experiences. Therefore, research on strategies for university teaching management in the internet era holds both theoretical and practical significance. Scientific teaching management strategies can effectively advance the modernization of higher education and support universities in cultivating high-caliber talents aligned with societal needs.

2. Literature Review

In recent years, with the rapid development of internet technologies, research on teaching management strategies in higher education has become a hot topic in the field of education. The relevant literature primarily focuses on the management and application of digital teaching resources, the implementation of blended teaching models, data-driven teaching



feedback mechanisms, and the application of intelligent technologies in teaching management.

Firstly, in the area of digital teaching resource management, Jiang ^[1] suggested that the “Internet Plus” model provides more diversified technological support for university teaching management. She examined the challenges in the integration of digital teaching resources in higher education and proposed the construction of shared teaching resource platforms to improve resource utilization. Similarly, Liu ^[2] emphasized strategies for optimizing the allocation of teaching resources based on big data technologies, arguing that data analysis can more accurately identify student needs, thereby enhancing the adaptability and personalization of resources.

Secondly, in the promotion of blended teaching models, Zhang ^[3] studied the effectiveness of combining online and offline teaching. He proposed that the blended teaching model can fully leverage the flexibility of online teaching and the interactivity of offline teaching. However, he also pointed out that the successful implementation of this model relies on the digital competence of both teachers and students and the support of university teaching management systems. In addition, Yin ^[4] explored the integration of ideological and political education with blended teaching, noting that this combination not only enhances teaching effectiveness but also better achieves educational goals.

Thirdly, regarding data-driven teaching feedback mechanisms, Gong ^[5] explored the application of big data technologies in learning behavior analysis. He suggested that by monitoring students' learning status in real-time, teaching management systems can provide teachers with precise teaching guidance, enabling personalized instruction. Meanwhile, Chen ^[6] highlighted that an efficient feedback mechanism requires not only technical support but also clearly defined feedback pathways and timelines within the management system to improve the practical effectiveness of feedback.

Finally, in the application of intelligent technologies, Wang ^[7] researched the prospects of artificial intelligence technologies in teaching management, particularly in areas such as exam monitoring, academic integrity management, and course recommendations. He argued that intelligent teaching management is a crucial direction for the future development of higher education institutions but also emphasized the importance of addressing ethical issues related to technology and data privacy protection.

In summary, the aforementioned studies indicate that internet technologies have brought profound changes to teaching management in higher education. However, their promotion and application still face challenges. Future research needs to further focus on the deep integration of technology and management, optimizing teaching management models, and enhancing both educational quality and management efficiency.

3. Innovation and Practice of Teaching Management Strategies in the Context of the Internet

3.1 Shared Educational Resources

Internet technology provides robust technical support for the digitalization and sharing of teaching resources in higher education institutions, enabling high-quality educational materials to transcend temporal and spatial constraints and serve a broader audience of educators and students. This resource-sharing model not only enhances the utilization efficiency of teaching resources but also significantly promotes educational equity.

Literature Analysis:

We collect recent research literature on the digitalization and sharing of teaching resources, particularly journal articles and case studies. This paper analyzes current trends in the digitalization of teaching resources, the development of technical support and sharing platforms, and elucidates the theoretical underpinnings and future directions of digitalized teaching resources ^[8,9].

Case Study Method:

We select representative universities (such as Zhejiang University and Tsinghua University), focusing on their digital teaching resource platforms, usage effectiveness, and existing challenges. Through these case analyses, we summarize successful experiences and innovative strategies.

Taking Zhejiang university as an example, the institution launched the “Intelligent Education Resource Sharing Platform”, which integrates course materials such as teaching videos, presentations, online quizzes, etc., achieving centralized management and resource sharing. Teachers can upload course materials, and students can access them anytime. This model significantly improves resource utilization efficiency, especially during the pandemic, providing robust support for distance learning. For instance, in the course “Fundamentals of Artificial Intelligence”, the platform offers comprehensive course materials for student self-study. According to statistics from Zhejiang university’s educational technology center, in the first semester after the platform’s launch, course resource visits reached 1.5 million, a 40% increase compared to the previous system. A questionnaire survey revealed that 85% of students believe digital resources greatly enhance learning efficiency, while 78% of teachers are satisfied with the ease of resource sharing. Data also showed that overall student satisfaction with the course increased from 76% to 91% ^[10].

Through this research and discussion, it is evident that the digitalization and sharing of teaching resources require innovations in technical support and management models. Driven by the internet, the digital resource platform not only optimizes teaching management but also provides students with more efficient and convenient learning tools. However, further improvements in the technology platform and enhancing teachers’ information literacy remain key priorities for the future.

3.2 Establish Personalized Learning Support Systems and Implement Intelligent Teaching Assessment

Leveraging internet and big data technologies, personalized learning support and intelligent teaching evaluation have emerged as critical directions for innovation in university teaching management. These technologies not only cater to the diverse learning needs of students but also provide teachers with precise feedback, thereby enhancing both teaching

quality and administrative efficiency.

Literature Analysis:

A comprehensive review of domestic and international research literature on personalized learning support and intelligent teaching assessment was conducted. This analysis examined the technical pathways, implementation outcomes, and challenges faced, forming a robust theoretical framework and research hypotheses ^[11,12].

Questionnaire and Interview Methodology:

Structured questionnaires and in-depth interviews were designed for both students and teachers involved in the experiment. These tools collected valuable insights and feedback regarding their experiences with the personalized learning support and intelligent assessment system.

Case Study:

A university developed a personalized learning support and intelligent evaluation system based on an Internet platform for the course “Foundations of Data Science”. By analyzing real-time learning behavior data (such as course clicks, assignment submissions, test scores, etc.), the system generated personalized learning reports for students, providing supplementary materials and practice recommendations for areas needing improvement. For instance, when a student performed poorly in the “Methods of Data Analysis” module, the system automatically recommended relevant video tutorials and exercises, along with progress reminders.

The student pass rate increased from 78% to 90%, and the average test score improved by 12%. Approximately 85% of students reported that personalized learning support enhanced their learning efficiency. Teachers could access real-time class performance statistics through the system, facilitating timely adjustments to teaching plans. Teacher satisfaction reached 88%. Additionally, 92% of students agreed that the intelligent assessment system helped them better understand their learning weaknesses and improve their academic outcomes ^[13].

Through rigorous research and analysis, it is evident that personalized learning support and intelligent teaching evaluation offer significant advantages in improving learning effectiveness and teaching efficiency. Real-time data analysis and feedback enable the system to provide personalized learning paths for students and scientific decision-making support for teachers. However, the successful implementation of these technologies requires addressing issues such as data privacy protection and enhancing teachers’ technological literacy to ensure sustainable development.

3.3 Implement a Blended Teaching Model

With the advancement of internet technology, the blended teaching mode has emerged as a prominent approach in the educational reform initiatives of colleges and universities. This model integrates online and offline instruction, thereby enhancing the flexibility of teaching while fostering greater student engagement and classroom interaction.

Literature Review:

This study compiles and analyzes recent research literature on blended teaching, with a focus on journal articles and case studies. It examines the current state of blended teaching, the technical infrastructure required, and the development of shared platforms. The analysis aims to elucidate the theoretical underpinnings and developmental trajectory of blended teaching from a scholarly perspective ^[14,15].

Methodology-Questionnaire and Interview:

To gather insights from participants, structured questionnaires and in-depth interviews were conducted among students and instructors involved in the blended teaching experiment. These methods aimed to collect comprehensive feedback on the blended teaching experience.

A university implemented a blended teaching model in its “Business Management” course. Course materials, including video lectures, PowerPoint presentations, and online quizzes, were uploaded to an online learning platform, allowing students to engage in self-paced learning at their convenience. During face-to-face sessions, instructors focused on addressing questions arising from independent study through group discussions, case analyses, and other interactive activities. For instance, in the “Business Strategy Analysis” unit, students utilized online resources to complete case readings and assignments, while class time was dedicated to group debates and instructor evaluations. Following the implementation of blended teaching, student satisfaction with the course increased from 76% to 89%, and class attendance improved by 12%. Data from the academic affairs system revealed that students with higher participation rates scored 15% higher on average in final exams. Additionally, faculty feedback indicated that this model significantly reduced the time spent on one-way lecturing, making classes more efficient and engaging ^[16].

The successful adoption of the blended teaching model not only optimizes the allocation of teaching resources but also enhances students’ learning initiative and classroom effectiveness. Its key strength lies in combining the richness of online resources with the interactivity of in-person instruction, enabling students to participate more actively in class discussions after engaging in independent study. However, challenges remain, such as variations in students’ self-directed learning abilities, instructors’ adaptability to technology, and the costs associated with developing online platforms. Addressing these issues through enhanced training for both teachers and students, along with optimized course design, will ensure the sustainable development of blended teaching.

4. Conclusion

It has been observed that Internet technology facilitates resource sharing and dynamic allocation, thereby enhancing the utilization efficiency of teaching resources. The deployment of intelligent assessment tools significantly improves the scientific rigor and objectivity of teaching quality evaluation. This study addresses a research gap in the domain of Internet technology and teaching management innovation, providing robust theoretical support for the digital transformation of higher education. Specifically, in terms of teaching management model innovation, this research

substantiates that technology-driven teaching management possesses broad applicability and profound implications. Internet technology offers substantial technical support and development opportunities for the innovation of university teaching management. However, the rational application of technology necessitates policy guidance, a shift in educational philosophy, and the restructuring of management frameworks. Moving forward, universities should leverage technology as a tool while prioritizing educational equity and quality, further exploring sustainable pathways for teaching management innovation to contribute to the global digital advancement of higher education.

Reference

- [1]. Jiang Yan. (2021). Research on the Innovation of Teaching Management Models in Universities under the Context of “Internet Plus”. *Educational Research and Experiment*, 34(5): 45-50.
- [2]. Liu Xiaosheng. (2023). Research on the Optimization of University Teaching Resource Allocation from the Perspective of Big Data. *Modern Educational Technology*, 40(3):12-18.
- [3]. Zhang Nan. (2023). Application of Blended Teaching Models in University Teaching Management. *Higher Education Research*, 41(2):56-62.
- [4]. Yin Chenlu. (2022). Research on the Integration of Ideological and Political Education with Blended Teaching Models. *Educational Science Research*, 39(4):78-84.
- [5]. Gong Yuqiang. (2022). Research on the Construction of a Teaching Feedback Mechanism Based on Big Data. *Research on Educational Informatization*, 38(6): 22-28.
- [6]. Chen Li. (2023). Discussion on the Optimization Path of Teaching Feedback Mechanisms in Universities. *Educational Management Review*, 40(1):34-40.
- [7]. Wang Minghui. (2023). Exploration of the Application of Artificial Intelligence Technology in University Teaching Management. *Science and Education*, 45(2):15-21.
- [8]. Li Haidong. (2021). Research on the Construction of University Teaching Resource Sharing Platforms in the Context of “Internet + Education”. *Education Modernization*, 8(34): 92-95.
- [9]. Wang Peng, Liu Lijuan. (2020). Investigation into the Sharing Models for High-Quality Course Resources in Higher Education Institutions. *Modern Educational Technology*, 30(2): 50-54.
- [10]. Zhang Chen. (2019). Analysis of University Teaching Resource Allocation Based on Big Data. *China Educational Informatization*, (6): 23-25.
- [11]. Liu Yufeng, Wang Yue. (2021). Design and Practice of a Personalized Learning Support Platform in the Context of Big Data [J]. *E-Education Research*, 42(7): 85-90.
- [12]. Zhang Liping, Li Zhigang. (2020). Investigation into University Teaching Management Reform Facilitated by Artificial Intelligence. *Modern Education Management*, 15(4): 58-62.
- [13]. Wang Na, Zhao Zhenzhong. (2019). Exploration of the Design and Application of an Intelligent Teaching Evaluation System. *China Educational Informatization*, (10): 23-25.
- [14]. Zhang Chenxi, Li Wei. (2020). Analysis of the Blended Teaching Mode in the “Internet+” Era. *Modern Educational Technology*, 30(4): 25-30.
- [15]. Chen Li. (2019). Exploration and Research on the Implementation of Blended Teaching Models in Higher Education Institutions. *Education and Career*, (18): 65-67.
- [16]. Lin Jun, Liu Ying. (2018). Investigation into the Theory and Practice of Blended Teaching Models. *Audiovisual Education Research*, 39(8): 90-95.