Research on Strategies for the Development of Higher Education Teaching in the Internet Age

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Abstract

With the advent of the Internet era, the rapid development of information technology has had a significant impact on various fields, and higher education is no exception. The widespread application of Internet technology has changed traditional teaching methods and learning approaches, bringing new opportunities and challenges to higher education teaching. In the Internet era, higher education teaching can leverage online learning platforms, educational software applications, and social media tools to achieve teaching innovation and improve teaching effectiveness. At the same time, teachers also need to continually update their teaching philosophies and methods to meet the requirements of the Internet era. Therefore, researching strategies for the development of higher education teaching in the Internet age is of great significance. It can guide universities and educational institutions to better adapt to and utilize the development trends of the Internet era, thus improving the quality and effectiveness of teaching. This study aims to explore strategies for the development of higher education teaching in the Internet age to address the impact of rapid information technology development on higher education.

Keywords

Internet era, higher education teaching, development strategies

1. Introduction

1.1 Research Objectives and Significance

The characteristics and needs of students’ learning have changed in the Internet era. Research can help educators better understand students’ needs and engage in targeted teaching activities to provide more effective learning experiences. In the Internet age, the role and requirements of teachers have also changed. Research can provide suggestions for teachers to transform their roles and enhance their professional development needs, facilitating their adaptation to the teaching environment of the Internet era. Internet technology has facilitated global educational collaboration and knowledge sharing. Research can explore how to utilize Internet technology to build global educational cooperation platforms, strengthening international education exchanges and cooperation.

1.2 The Impact of the Internet Era on Higher Education

Changes in teaching models: Internet technology has brought diverse teaching models to higher education. Tradition-
al face-to-face lectures are gradually combined with online learning, leading to new forms of instruction such as blended learning, distance education, and open online courses (Zembylas Michalinos, 2023). Students can flexibly choose their learning methods based on their time and location, and the sharing of teaching resources has significantly expanded.

Changes in students' learning characteristics and needs: Students in the Internet era are more accustomed to the convenience and speed of information acquisition, and they tend to actively participate and engage in self-directed learning. There is an increased demand among students for flexibility, personalized learning, and experiential learning (Luo Yuting, 2022). They hope to access richer learning resources and engage in interaction with teachers and peers through Internet technology.

Transformation of the service-oriented value of higher education: In the Internet era, higher education not only focuses on knowledge transmission but also emphasizes cultivating students' innovation, problem-solving, and lifelong learning abilities. Higher education institutions need to provide more support and guidance, including integrating learning resources, providing learning guidance, and offering personalized learning plans to meet students' comprehensive needs.

Promoting global collaboration and knowledge sharing: Internet technology has broken geographical barriers and facilitated global collaboration and knowledge sharing in higher education (Chen Z & Wu Y, 2018). Students and teachers can interact and exchange with educational resources and experts worldwide through online platforms, engage in cross-national collaborative research projects, and enhance teaching and research standards.

2. Opportunities for the Development of Higher Education Teaching in the Internet Age

2.1 Changes in Teaching Models

Flexible learning options: Internet technology enables students to choose more flexible learning methods. Online learning platforms and distance education allow students to engage in self-directed learning based on their own time and location, providing greater learning flexibility.

Blended learning: Internet technology facilitates the integration of traditional face-to-face instruction with online learning, resulting in a blended learning model. Teachers can provide learning resources and instructional activities through online platforms, while in-person class time can be devoted to interaction and discussion, enhancing student engagement and learning outcomes.

Open online courses: Internet technology has driven the emergence of Massive Open Online Courses (MOOCs). Higher education institutions can offer large-scale online courses, providing high-quality educational resources to students worldwide, promoting knowledge sharing and dissemination (Bocconi S & Trentin G, 2018).

Personalized learning: Internet technology enables the provision of personalized learning content and pathways based on students' learning needs and interests. Through learning management systems and learning analytics tools, teachers can understand students' learning progress and provide targeted personalized learning support and guidance.

Interdisciplinary collaboration: Internet technology promotes opportunities for interdisciplinary collaboration and cross-institutional cooperation. Students can collaborate and communicate with students and experts from different fields through online platforms, working together to solve complex problems and enriching their learning experiences.

2.2 Changes in Students' Learning Characteristics and Needs

Students in the Internet age are more accustomed to self-directed learning and independent information acquisition. They tend to actively search for and filter information using Internet technology, cultivating strong self-learning abilities. Higher education teaching can further stimulate students' self-directed learning abilities by providing open learning resources and personalized learning support. Internet technology provides students with diverse learning experiences. Through online learning platforms and multimedia teaching tools, students can access a wealth of learning resources, including videos, interactive textbooks, virtual laboratories, and more. These diverse learning experiences can inspire students' interest in learning and improve learning outcomes.

Internet technology provides opportunities for personalized learning. Through learning management systems and learning analytics tools, educational institutions can access students' learning data and provide personalized learning resources and plans based on their learning needs and interests. This helps meet students' different learning styles and paces, enhancing learning effectiveness and satisfaction. Internet technology promotes global educational collaboration and cross-cultural communication. Students can communicate and collaborate with students and teachers from around the world through online platforms, jointly exploring and solving problems. This global learning opportunity broadens...
students' horizons and fosters cross-cultural communication and collaboration skills.

### 2.3 Transformation of the Service Value in Higher Education

Internet technology enables higher education institutions to access and share learning resources more extensively. Through open educational resources, online libraries, and digital learning materials, students can access a richer and more diverse range of learning resources, enhancing the quality and depth of their learning.

Internet technology allows higher education institutions to provide personalized learning support to students. Through learning management systems and online learning platforms, students can customize their learning plans, participate in personalized learning activities, and receive targeted learning guidance and feedback, enhancing learning outcomes.

Internet technology provides traceability of the learning process for higher education institutions. Through online learning platforms and learning management systems, educational institutions can monitor students' learning progress and performance in real time, understand their learning needs and challenges, and provide appropriate support and assistance to improve their learning effectiveness.

Internet technology enables higher education to transcend temporal and spatial limitations. Students can participate in learning activities through online courses, distance education, and interactive video conferences, conveniently accessing educational resources and engaging in communication and collaboration with teachers and peers regardless of their location.

Internet technology provides opportunities for community learning in higher education. Through online social platforms and academic forums, students can engage in communication and collaboration with classmates, teachers, and experts, jointly solving problems and discussing academic issues, promoting academic exchange and knowledge sharing.

### 3. Strategies for the Development of Higher Education Teaching in the Internet Era

#### 3.1 Transformation of Teacher Roles and Professional Development Needs

Education institutions should provide training and professional development opportunities tailored to teaching in the internet era, helping teachers acquire new teaching skills and tools (Asri T M, Irmawati D K, & Dewi D N, 2020). This can include training in educational technology, workshops on online teaching methods, curriculum design and assessment, and other initiatives to assist teachers in adapting to the changing modes of instruction. Education institutions should encourage teachers to experiment with new teaching methods and technologies to enhance teaching effectiveness and student engagement. Additionally, support and resources should be provided to teachers to encourage innovative practices in instructional design, curriculum development, and learning assessment.

Education institutions can establish collaborative and sharing platforms among teachers to foster communication and cooperation. These platforms can take the form of online communities, teaching workshops, or instructional observation activities, enabling teachers to share experiences, exchange teaching methods, and collectively address teaching challenges. To incentivize active participation of teachers in the development of teaching practices in the internet era, education institutions can establish corresponding teacher evaluation and recognition systems. This includes evaluating teachers' teaching effectiveness, recognizing and rewarding innovative practices, and providing opportunities for advancement and career development.

#### 3.2 Innovative Teaching Design and Curriculum Development

Utilizing internet technology, teachers can integrate diverse learning resources, including online textbooks, videos, simulations, virtual experiences, etc., to provide richer and more diverse learning experiences. With the help of online learning platforms and open educational resources, teachers can select appropriate learning resources to meet students' diverse learning needs. Teaching design in the internet era should focus on incorporating interactive teaching methods to enhance student engagement and interaction. For example, using online discussion forums, virtual laboratories, interactive games, etc., to stimulate students' interest in learning and improve learning outcomes.

Teaching design in the internet era should prioritize personalized learning to cater to students' individual learning needs and interests. Through learning management systems and learning analytics tools, teachers can understand students' learning styles, progress, and difficulties, providing personalized learning support and feedback to enhance student learning outcomes. Teaching design in the internet era should emphasize project-based and experiential learning. By introducing real-world cases, practical projects, and interdisciplinary learning tasks, students can apply their ac-
quired knowledge to practical problem-solving, cultivating practical skills and innovative thinking.

Teaching design in the internet era should encourage collaborative learning and community building. Through online collaboration tools and academic social platforms, teachers can organize collaborative learning activities among students, promote knowledge sharing and mutual learning, and foster students' spirit of cooperation and teamwork. Teachers should employ various forms of assessment methods, such as online quizzes, assignment evaluations, learning analytics, etc., to promptly assess teaching effectiveness and improve teaching design based on feedback. Teachers should actively engage in teaching research and reflection, continuously optimizing teaching design and curriculum development.

3.3 Improvement in Teaching Assessment and Feedback

Traditional exam-based assessment methods may not comprehensively evaluate students' learning outcomes. Educational institutions should encourage teachers to use diverse assessment methods, such as project reports, essays, real case analyses, online quizzes, assignment evaluations, etc., to gain a comprehensive understanding of students' knowledge acquisition and skill development. Teaching assessment in the internet era should emphasize the involvement of self-assessment and peer assessment by students. Teachers can guide students to reflect on and evaluate their own learning and encourage them to engage in peer assessment, promoting their autonomy in learning and collaborative learning abilities.

Internet technology can provide teachers with timely feedback mechanisms on students' learning progress. Teachers can utilize online learning platforms and learning management systems to provide personalized learning feedback to students, helping them identify and rectify learning issues promptly to improve learning outcomes. Educational institutions can employ data analysis and visualization tools to analyze and showcase students' learning processes and achievements. Through visualization, teachers and students can intuitively understand learning situations and progress, enabling targeted teaching improvements and learning adjustments. Teachers should actively engage in teaching reflection and continuously improve teaching methods and strategies based on the results of teaching assessment and feedback. Educational institutions can provide corresponding support and resources, encouraging teachers to participate in teaching research and development activities to promote continuous enhancement of teaching quality.

3.4 Upholding Student-Centered Education

In order to meet the diverse learning needs of students, educational institutions should provide personalized learning pathways and support. By utilizing learning management systems and learning analytics tools, teachers can tailor learning plans and resources to students' interests, abilities, and learning styles, offering personalized learning support and guidance. Student-centered education should prioritize student participation and initiative. Teachers can introduce participatory teaching activities such as group discussions, project research, and practical internships, encouraging students to actively engage and collaborate, fostering their problem-solving, innovative, and teamwork skills.

Advocating reflection and metacognitive abilities, student-centered education should value students' reflection and cultivation of metacognitive abilities. Teachers can guide students in reflecting on their learning processes, thinking patterns, and learning strategies, helping them become aware of their learning needs and goals, and providing appropriate support and guidance. Encouraging student involvement in communities and practical activities, student-centered education should motivate students to participate in community and practical activities, broadening their perspectives and practical experiences. Educational institutions can collaborate with businesses, social organizations, and communities to provide practical opportunities and social service projects, enabling students to integrate their knowledge with real-world issues and cultivating their sense of social responsibility and practical skills.

Establishing effective communication and feedback mechanisms, student-centered education should emphasize the establishment of effective communication and feedback channels between teachers and students, among students, and between schools and parents. Educational institutions can utilize online platforms, social media, and regular meetings to facilitate information flow and exchange, promptly understanding students' learning situations and needs, and providing corresponding feedback and support.

4. Conclusion

The internet era has brought both opportunities and challenges for the development of higher education teaching. Through the transformation of the teacher's role and the demand for professional development, teachers can adapt to the teaching environment of the internet era and provide better teaching services. Innovative teaching design and curriculum development can enrich learning experiences and enhance learning outcomes. Improvements in teaching evaluation
and feedback can ensure teaching quality and student learning outcomes. The development of higher education teaching in the internet era requires collaboration among educational institutions, teachers, and students, with a focus on student-centered approaches and continuous innovation and improvement in teaching models, instructional design, teaching evaluation, and feedback mechanisms to provide high-quality education services and cultivate highly qualified individuals with innovative and practical abilities.

Funding

This article is a partial achievement of the 2021 School-level Teaching Reform Project at Southwest Medical University, titled "A Study on Learning Adaptability and Development Strategies for Transfer Students in Medical Colleges" (Project No: ZYTS-44).

References

DOI: 10.1080/13803611.2014.996367