Research on the Quality Assurance System of Higher Education Teaching Based on Digital Transformation

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Abstract: With the development and application of information technology, college teaching is undergoing profound changes. Digital transformation is becoming an inevitable trend in the reform and development of teaching in universities. In the context of digital transformation, the teaching quality assurance system in universities is facing new challenges and opportunities. Building a scientific and reasonable quality assurance system for college teaching is of great significance for improving the quality of college teaching and cultivating high-quality talents. This paper takes digital transformation as the starting point to study the quality assurance system of college teaching systematically. Starting from the connotation and characteristics of digital transformation, this paper analyzes the transformation difficulties of the teaching quality assurance system in universities, and based on this, proposes specific strategies for optimizing the teaching quality assurance system in universities under the background of digital transformation. This aims to provide theoretical support and practical guidance for the transformation of the teaching quality assurance system in universities.

Keywords: Digital Transformation; College Teaching Quality in Universities; Guarantee System

1. Introduction

Since the 1980s, China has gradually built a higher education teaching quality assurance system based on the undergraduate teaching evaluation system. But with the continuous advancement of the digital wave, the teaching quality system of universities is facing new challenges and opportunities. [1] The rapid development of digital technology has provided universities with rich teaching tools and innovative methods, promoting changes in educational methods, and digital development has significantly changed the characteristics of student groups. As a representative student group of digital natives, there is an urgent need for interactive and personalized learning, as well as real-time feedback. Therefore, in-depth research on how to build an effective teaching quality assurance system can help ensure that digital education innovation can truly serve the improvement of teaching quality. This can also help universities better cope with the challenges of the digital age.

2. The Dilemma of the Current Teaching Quality Assurance System in Universities

2.1. The Concept of Ensuring Teaching Quality Has Been Alienated

Currently, a key issue facing the teaching quality assurance system in universities is that its teaching quality assurance concept is plagued by exogenous constraints, namely being overly constrained by external factors. This affects the independence and flexibility of universities themselves. Specifically, firstly, universities overly rely on traditional evaluation indicators such as subject rankings and graduate employment rates. Although this external indicator provides a superficial measure for universities, it can easily lead to a rigid concept of teaching quality assurance, overly focusing on superficial quantitative indicators, and neglecting the deeper teaching process and student development. [2] Secondly, universities place too much emphasis on standardized evaluation. In order to meet the requirements of external evaluation, universities may excessively standardize teaching processes, weaken the space for teacher innovation to meet the needs of external standards, leading to the rigidity of the education process and the lack of personalized teaching methods. Thirdly, for the promotion of digital transformation, some universities may simply introduce digital technology and fail to truly integrate it into the concept of teaching

quality assurance. The introduction of digital tools through this mechanical approach results in a lack of deep understanding of education in the digital age in the teaching quality assurance system, and the inability to fully leverage the advantages of digital technology in improving teaching effectiveness. Fourthly, the expectations of society towards universities also to some extent constrain the independent development of the concept of ensuring teaching quality. Social pressure may lead universities to pay more attention to surface effects and neglect the importance of cultivating students' comprehensive literacy and innovation ability to some extent.

2.2. The Main Body for Ensuring Teaching Quality is Relatively Single

At present, the main body for ensuring teaching quality in Chinese universities is relatively single, which affects the comprehensive development of the system. On the one hand, the teaching quality assurance system overly emphasizes a management system led by the school's administrative level. In this situation, decision-making power is often held at the level of administrative leadership, while school leaders often lack in-depth understanding and comprehensive consideration of teaching quality. This can easily lead to a teaching quality assurance system that leans towards macro planning, and the actual needs of teachers and students in the teaching process cannot be specifically reflected. Moreover, excessive emphasis on administrative leadership results in insufficient participation of teachers and students in the construction of the teaching quality assurance system. The direct experience and feedback of teachers and students in teaching are often valuable resources. If they cannot fully participate in the construction of the teaching guarantee system, it will inevitably be difficult to truly reflect the full picture of teaching. On the other hand, the guarantee of teaching quality relies too much on the self supervision and evaluation of internal administrative departments. This will narrow the perspective of evaluating and improving teaching quality, making it difficult to fully and deeply understand the problems and challenges that exist in teaching practice; At the same time, the lack of external independent supervision and evaluation can lead to subjective and limited judgments on teaching quality. In addition, the

excessive reliance on school administration to ensure teaching quality can easily lead to the neglect of differentiated needs among different disciplines, majors, and courses; Different disciplines have their own characteristics and teaching needs, and a "one size fits all" quality assurance strategy may not be flexible and applicable enough. [3]

2.3. Incomplete Teaching Quality Assurance Technology

At present, the teaching quality assurance system in universities is generally imperfect in terms of technology, which is reflected in the following aspects. Firstly, there are limitations in the data collection and analysis techniques used in the teaching quality assurance system. Although digital transformation has become a trend in education, some universities have not fully explored the potential of big data analysis in teaching quality evaluation, lacking a comprehensive and real-time data collection mechanism, and the evaluation tends to be more qualitative, making it difficult to fully understand the learning behavior of students and the teaching effectiveness of teachers. Secondly, the teaching evaluation tools used in the teaching quality assurance system have not fully integrated advanced technological means; Traditional evaluation methods are difficult to fully reflect students' actual abilities and subject literacy. Modern technologies such as artificial intelligence and virtual reality can provide more objective and diverse evaluation methods, but their application in universities is still relatively limited. Thirdly, some universities have not fully utilized the potential of online learning platforms. Although online education has gradually become the mainstream of development, the teaching quality assurance systems of some universities have not yet effectively integrated online learning platforms; The insufficient integration of online and offline teaching can easily lead to incomplete evaluation results and insufficient consideration of special factors in the online learning environment. Fourthly, there is also a lack of teaching quality assurance technology in providing real-time feedback and personalized tutoring. Students need personalized support during the learning process, and current technology has not effectively met the needs of personalized education, making it difficult for students to receive sufficient attention and

assistance.

3. Optimization Strategies for the Quality Assurance System of Higher Education Teaching Based on Digital Transformation

3.1. To Continuously Update and Improve Value Concepts, and Adhere to the Principle of Putting Teachers and Students First

In response to the exogenous problems in the quality assurance system of higher education teaching, universities should gradually update and improve their values and concepts, focusing on putting teachers and students first. Firstly, universities should gradually expand their evaluation indicators, not only focusing on traditional rankings and employment rates, but also considering multiple indicators such as students' innovation ability and practical application ability, and introducing comprehensive quality evaluation, such as project works and practical experience. This can encourage schools to pay comprehensive attention to the development of students in different fields, and encourage regular internal evaluations to deeply explore the advantages and problems in the teaching process, reducing excessive reliance on external indicators. Secondly, universities should advocate flexible evaluation methods, reduce excessive reliance on standardized evaluation, and establish diverse evaluation mechanisms, such as teaching observation, student feedback, peer review, etc. This can provide a more comprehensive understanding of the needs of teachers and students, actively encourage teachers to fully unleash their creativity in teaching, and avoid overly rigid and standardized evaluations. In addition, universities should continuously update and improve, integrate digital technology into the concept of teaching quality assurance, introduce digital tools, and incorporate digital technology into the core content of teaching quality evaluation. Universities should also establish a real-time data monitoring system to track the learning process of students and provide personalized guidance and improvement suggestions for teachers. At the same time, universities should strengthen teacher training to fully understand and apply digital technology, and promote the comprehensive application of digital transformation in teaching. Finally, universities should strengthen publicity and education both inside and outside the campus to enhance society's understanding of the independent development of ensuring the quality of college teaching. Through regular educational activities and open and transparent evaluation mechanisms, universities convey their determination to cultivate comprehensive talents to society, avoiding excessive catering to social expectations and sacrificing teaching quality. Universities also establish platforms for communication between universities and society, promoting understanding and resonance, and jointly promoting the independent development of the concept of ensuring teaching quality in universities.

3.2. To Expand the Main Body of Quality Assurance and Create Multi-Party Participation in Quality Assurance

To solve the problem of a single subject in the teaching quality assurance system of Chinese universities, universities need to take a series of specific measures to establish a comprehensive, flexible, and highly participatory system. To elaborate, firstly, universities should establish a diversified decision-making mechanism and establish a teaching quality assurance committee, composed of interdisciplinary experts, teacher representatives, and students, to jointly participate in the decision-making and supervision of teaching quality. This can ensure greater diversity in teaching quality evaluation and improvement decisions; This can also fully consider the needs of different disciplines, majors, and levels, reducing the one-sidedness of a single subject. [4] Secondly, universities should strengthen the combination of internal and external evaluations, introduce external professional institutions to participate in teaching quality evaluation, and ensure the objectivity and independence of the evaluation. At the same time, universities should establish internal evaluation mechanisms within the campus, which should be coordinated by internal professional teams and the school's administrative level. By combining internal and external evaluations, universities can not only obtain external professional perspectives, but also fully consider the actual situation within the school, promoting the comprehensive improvement of teaching quality through a dual approach. In addition, universities should advocate a model of collaborative construction and sharing between teachers and students, establish a platform for teachers and students to

participate in decision-making, and encourage teachers and students to actively participate in the process of ensuring teaching quality; Universities can also establish teacher learning communities and student delegations to enable teachers and students to play a more active role in teaching evaluation, improvement, and decision-making, ensuring that the teaching process is more closely aligned with practical needs. Finally, universities should establish differentiated quality assurance strategies, consider the diverse needs of different disciplines and majors, and promote differentiated quality assurance strategies. Through this, universities can fully understand the teaching characteristics and needs of various disciplines, develop flexible and actionable evaluation standards and methods, and make the quality assurance system more targeted and adaptable.

3.3. To Build a Diversified Quality Assurance Technology System With the Help of Modern Digital Technology

The improvement of the teaching quality assurance system in universities requires fully tapping into the potential of modern technology and enhancing the effectiveness of the teaching quality assurance system. Firstly, universities should strengthen the application of big data analysis technology, establish a comprehensive and real-time data collection mechanism, and fully tap into the potential of big data analysis in teaching quality evaluation. Universities can use modern data science methods to analyze student learning behavior and teaching effectiveness, achieve more accurate and objective evaluations, promote the construction of digital statistical platforms, integrate student learning data, and provide stronger support for decision-making. Secondly, universities should integrate advanced evaluation techniques, introduce modern technologies such as artificial intelligence and virtual reality, use artificial intelligence for intelligent evaluation, quantify students' actual abilities, and provide personalized subject literacy assessments. At the same time, universities advocate innovative evaluation methods and tailor personalized evaluation standards to better meet the needs of teachers and students in different disciplines and majors. [5] In addition, universities make full use of online learning platforms, strengthen the integration of online learning platforms and

teaching quality assurance systems, and ensure the organic combination of online and offline teaching. Overall, this can promote the application of evaluation tools for online learning environments, establish a mechanism for sharing online learning resources, fully leverage the convenience and flexibility of online learning, and form a unified teaching quality assurance system through the organic connection between online and offline.

4. Conclusion

In the wave of digital transformation, it is particularly urgent to improve and enhance the quality assurance system of university teaching. However, digital transformation is only the beginning, and the key lies in transforming theory into practical and feasible practices, promoting the true improvement of teaching quality. In the future, universities need to continuously promote technological innovation, encourage interdisciplinary cooperation, and make digital education a powerful engine for the development of universities. This can promote the formation of a more comprehensive teaching quality assurance system. Only in this way can we better meet the diverse needs of students, cultivate a new generation of talents with innovative and practical abilities, and promote higher education to continue to move towards higher levels.

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