

Innovative Research on the Development Strategy of Higher Education Informatization in the Era of “Internet Plus”

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Abstract:

This article mainly discusses the development of higher education informatization in the era of “Internet plus”. By means of literature and data query, it first introduces the connotation of higher education informatization, then points out the current situation and problems of higher education informatization, and finally expounds the significance and strategies of higher education informatization development in the era of “Internet plus”. The results show that the integration of higher education informatization construction and “Internet plus” can promote the development of higher education informatization and achieve the goal of improving the quality of talent training.

Keywords:

“Internet Plus” Era, Higher Education, Information Technology Development

1. Introduction

For colleges and universities, informatization construction and development is the key to determine whether they can obtain good competition. “Internet plus education” is an effective way to successfully transform higher education in the Internet era. Analyzing the current situation of informatization in higher education, there are many problems in the cognition, management, and application of informatization, which greatly restrict the development pace of informatization. How to use “Internet plus” to develop and innovate the informatization of higher education and improve the quality of talent training and core competitiveness has become an important issue for colleges and universities.

2. The Connotation of Informatization in Higher Education

In the field of educational informatization, higher education informatization is one of the most important components. Before conducting research on the informatization of higher education in China, it is necessary to understand the connotation of

informatization in higher education, which can be analyzed from the following aspects:

(1) Definition of informatization in higher education. At present, Chinese higher education institutions have different understandings of the definition of informatization in higher education: a. relying on communication technology, focusing on the construction goals of digital campuses, using information technology in school management, teaching and research, etc., to improve teaching and research level, improve management effectiveness, and cultivate talents that are more suitable for the current social situation. b. Reform the education system with modern intelligent education technology to better adapt to the requirements of the knowledge economy. Based on the above definitions, this article understands higher education informatization as a systematic project guided by modern educational methods and concepts, introducing information technology in various stages, improving teaching modes, integrating teaching resources, enhancing the information technology level of teachers and students, and promoting the development of modern teaching.

(2) The goal of informatization in higher education. The reason why schools can exist is because they can cultivate the talents needed by society. As a way to provide services for schools, the goal of higher education information is to use the information technology under “Internet plus” to provide services for school management and teaching, improve the management efficiency and school running quality of schools, and promote the modernization of higher education.

3. The Current Situation and Problems of Informationization in Higher Education

3.1. Current Situation of Informationization in Higher Education

In China, the proposal of higher education informatization was introduced in the 1990s, with the promulgation of the “Outline of Education Rules” and the “Ten Year Development Plan for Education Informatization” in 2010 and 2012, respectively. This pushed the education informatization of higher education institutions to a climax, providing more directions and sufficient impetus for the reform and development of education and teaching. Compared to developed countries abroad, although China's higher education informatization was proposed later, its development momentum is not inferior to these countries. After a period of exploration, higher education informatization has made significant progress in various aspects. Nowadays, China's colleges and universities have basically established an information-based teaching environment. The Internet access rate has reached 100%, and the wireless network coverage has also been improved. At the same time, the information system for school management and teaching has also reached a certain scale, and the construction of high-quality resource sharing courses and video open courses is also in full swing.

3.2. Problems in Informationization of Higher Education

In the era of “Internet plus”, the country has continuously increased its emphasis on the informatization of education in colleges and universities, which has enabled many colleges and universities to build relatively perfect informatization infrastructure and basically form an education informatization system. At the same time, almost all universities have built internal networks and campus one card systems, and most universities have also built big data cloud platforms, providing guarantees for the

development and promotion of educational informatization. However, in reality, there are also some problems with the informatization of higher education: a. Insufficient awareness of educational informatization. Although many universities have done a lot of work in the construction of educational informatization, they lack overall planning and blindly copy the models of other schools in their work, without combining the situation and characteristics of their own schools to build information facilities. Moreover, the understanding of educational informatization is not comprehensive, and there are problems such as focusing on hardware facilities, neglecting software facilities, emphasizing construction speed, and neglecting overall planning. b. The system is not perfect. During the construction of higher education informatization, although higher education institutions have formulated relevant norms and standards around this goal, the work system, talent management policies, and assessment and incentive mechanisms are all in a state of absence, which cannot guarantee the effectiveness and sustainability of education informatization construction and is not conducive to its future development. Educational resources have not been shared. The educational and research resources of higher education institutions have certain characteristics, and mutual sharing can achieve optimal allocation of educational resources. However, at present, there is a low degree of sharing of educational resources in higher education institutions, and the role of information technology in the integration of industry and education has not been well played, which hinders the development and innovation of educational informatization. Insufficient funding investment. Information construction requires financial support, and sufficient funding can improve the level of information construction. From an overall analysis of information technology construction, some schools have a lack of funding, resulting in a lack of sufficient resources for the construction and development of information technology, which greatly restricts the development of information technology in higher education.

4. The Significance and Strategies of Higher Education Informatization Development in the Era of “Internet plus”

4.1. The significance of information technology development in higher education

The arrival of the “Internet plus” era has brought more new opportunities to traditional education and teaching. Analysis has found that China’s initial education was centered around textbooks, later changed to textbooks, and finally evolved into student-centered education. With the continuous promotion of education and teaching reform, the country has proposed a strategic policy for developing the education industry and carried out a series of teaching reforms. The teaching process revolves around the quality of talent cultivation, ensuring that higher education can match the current social development situation and provide more high-quality talents for the construction and development of the country. Based on the analysis of orthodox educational concepts, the main focus is on the basic construction of students, shifting from erudition to specialized development. These requirements for students are relatively high, requiring them to present their knowledge structure in the form of a pyramid. In the process of educational informatization construction, the most important measure is to innovate educational concepts, increase the promotion and application of information technology, optimize teaching modes, and enable students to obtain more and more advanced knowledge. This provides a good atmosphere for students to engage in exploratory learning, which is completely in line with China’s current demand for talents.

4.2. Strategies for the Development of Informationization in Higher Education

4.2.1. Enhance awareness of educational informatization

The informatization of higher education is closely related to the realization of educational modernization, and also affects the overall development of higher education institutions. Therefore, higher education institutions must enhance their understanding of educational informatization. However, from the current perspective, there are still many higher education management teams in China who believe that educational informatization is only a technical facility in school management and research, and have not invested more research and time in informatization construction, resulting in a lack of necessary strategic planning for informatization construction, which is not conducive to the development and innovation of educational informatization. In view of this, the school must grasp the opportunity of the “Internet plus” era in time, implement the guiding ideology of the Scientific Outlook on Development in time, vigorously promote the significance of educational informatization in the school, so that all teachers and staff have a full and correct understanding of it; Based on the school’s situation and the information technology needs of teachers and students, scientifically design the information technology development plan to provide more and more reliable guarantees for the development and transformation of various work in the school.

4.2.2. Emphasize the cultivation of high-quality talents

Analyzing the development process of higher education in China, it is found that the improvement of education quality has stage characteristics. In the first stage, higher education formulates and evaluates teaching quality standards based on the standards of the education department, but this approach overlooks the practical abilities of students. In the context of increasingly fierce external competition, the evaluation of teaching quality has also undergone changes, starting to shift towards focusing on the needs of different subjects. Based on school level analysis, in most cases, the evaluation is based on the work ability of the teacher team; Based on social analysis, the creative ability of graduates in society will be used as the evaluation criterion. At the current stage of higher education development, the evaluation is mainly focused on the innovation ability of students. However, no matter what stage, we should aim to cultivate high-quality talents, especially in the context of the “Internet plus” era, we should strictly follow this goal, so as to continuously provide available talents for the society.

4.2.3. Improve the system and mechanism of educational informatization

In the era of “Internet plus”, higher education must develop a relatively complete information management system and mechanism to provide institutional guarantee for the development of educational activities, so as to improve the security and systematicness of information construction. Generally speaking, in the construction and improvement of institutional mechanisms, these tasks need to be done well: a. Improve work systems, use information management methods, comprehensively sort out different modules and module functions in educational informatization, and based on this, develop standardized work mechanisms to provide more professional and standardized information services. b. Improve the management talent policy. Talents are the source of all work and the driving force for the development and innovation of education informatization in the “Internet plus” era. Only by strengthening the

training of informatization talents, can schools ensure the implementation of various informatization development and innovation measures [4]. c. Improve the information security system, increase attention to the security of school networks, actively build network security protection systems, timely inspect network security risks, and promptly address any necessary issues to ensure that the school's network system can continuously and securely serve teachers and students.

4.2.4. Strengthen the construction of teaching resources

In the era of “Internet plus”, various information technologies are constantly emerging and applied, and the amount of information data is also increasing. People have more choices in information query and selection. In the field of higher education, the advantages of information technology are more obvious. In previous higher education teaching, the main teaching resources used were courseware designed by teachers based on textbooks, including pictures and text. A more creative approach was to play the courseware in a dynamic form. Under the construction of informatization, the types of teaching resources have become increasingly diverse, such as flipped classrooms, micro lesson videos, etc., which have broadened the horizons of students. At the same time, practical training can also be conducted in a simulation environment, with high student participation and hands-on ability being exercised. In order to better play the role of teaching resources, the school can build a teaching resource database, and through the use of Internet technology, provide convenience for students to access information, reduce the pressure and difficulty of learning; Establish an information-based learning platform, increase the development and utilization of online courses such as MOOCs and micro courses, draw on the online teaching experience of other countries, constantly grasp and learn from the teaching resources that have evolved, and promote the informatization development of higher education while efficiently constructing educational courses.

4.2.5. Construction of Information Management and Application Systems

In the “Internet plus” era, information management systems and application systems play a vital role in promoting the development of information technology. For higher education institutions, it is necessary to have both a teaching management website and an information management platform covering teaching and research, finance, logistics and other businesses. This helps teachers to share information with each other and also facilitates students to query relevant data; By utilizing mobile networks to improve and optimize the office system, it provides convenience for the school management to process queries, while also enabling multi-party coordination to solve related problems and improve management efficiency; Strengthen the construction of campus one card system and provide high-quality network services for students' campus life. In fact, the One Card is a symbol of student identity, recording various information related to students, identifying their identity, and facilitating their daily lives such as libraries and dormitory buildings. It reduces information redundancy in multi card situations and provides necessary conditions for the realization of resource sharing goals under informatization.

4.2.6. Co construction and sharing of educational resources

At present, there are common problems in higher education institutions in China, such as the inability to share educational resources and the shortage of high-quality resources. The promotion of co construction and sharing of educational resources can

stimulate higher education institutions to carry out educational informatization construction and achieve the sharing of educational resources. In the era of “Internet plus”, more and more schools explain knowledge in the form of MOOC, and share their digital resources through the network platform. However, there are also problems such as few shared resources and the inability to share high-quality resources. In view of this, the education department can organize higher education institutions to establish alliances, which can be carried out in key areas first and then promoted to other regions; Alternatively, it is possible to establish alliances in the same field first, and then switch to cross disciplinary approaches to provide new ideas for solving the problem of educational resource sharing. In addition, member schools within the alliance can also engage in scientific research cooperation, implement measures such as network resource sharing and mutual recognition of different schools, and cultivate talents through the integration of high-quality resources in schools. The construction of an educational research sharing platform is the key to promoting resource sharing. It can comprehensively open up resources of various universities, promote cooperation between universities, and provide effective channels for communication between teachers and students, thereby reducing the educational gap among schools and promoting fairness in education and teaching.

4.2.7. The proportion of reasonably designed teaching modes in the classroom

The development of higher education informatization has accelerated the pace of teaching mode transformation. The emergence of teaching modes represented by micro courses and MOOCs, as well as the promotion of fragmented concepts, have posed a great threat to the classroom status of traditional teaching modes. However, it should be noted that although the information-based teaching model has significant advantages, it does not mean that it completely negates traditional teaching models, let alone completely abandons them. They are just different in teaching philosophy, each with its own advantages and disadvantages, like the wings of birds, lacking any one is incomplete. In this regard, higher education institutions need to fully integrate the two based on their own teaching situation, and form a teaching model that is in line with the actual situation of the school by leveraging their advantages.

5. Conclusions

To sum up, in the context of “Internet plus”, the development of higher education teaching is not only more convenient, but also brings opportunities for the reform and innovation of higher education, which requires colleges and universities to put the construction and development of informatization in the first place, strengthen the informatization construction through rich teaching resources, high informatization level teacher teams, perfect information systems, etc., and promote the sound development of informatization in the reform and innovation of higher education, So as to improve the education and teaching level, management efficiency of the school, and achieve the ultimate educational goals. In the future, it's believed that with the development of information technology, the informatization of higher education will continue to improve, enabling smoother sharing of teaching resources and the delivery of more skilled talents to society.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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