



The Value Implications of Online Education in Universities in the Post-epidemic Era and Practice Progression

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Abstract. With the effective control of the domestic epidemic, the researchers have entered the post-epidemic era, which means that the lifestyle will change to “epidemic normalization”. The integration of “online and offline” education will be the trend of university education. The purpose of this paper is to discuss the problems and significance of online education in colleges and universities in the post-epidemic era, and to provide countermeasures for the development of online education in colleges and universities in the post-epidemic era.

Keywords: Post-epidemic era · Online education in universities · Value implication · Practice progression · New era · Higher education institutions · Labor education evaluation system

1 Introduction

To prevent the spread of the Newcastle Pneumonia epidemic to schools, the opening of schools was postponed and all offline education and training institutions nationwide were shut down. The Ministry of Education initiated a “school closure” initiative to provide online learning resources and support services for students by pooling national and regional resources, taking advantage of the good foundation laid by education informatization in the past, as an emergency measure in the event of an epidemic. In this context, in order to ensure the normal learning progress of students during the epidemic, education departments and universities around China are actively working on online education to help students complete their academic tasks at home. As of the effective control of the epidemic, months-long online education at home has become a regular form of online learning, not just a fragment of time after school, so it is far-reaching through the study of online education in universities in the post-epidemic era.

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2 Value Implications of Developing Online Education in Universities in the Post-epidemic Era

2.1 The Development of Online Education in Colleges and Universities is the Need of the Situation to Cope with the Normalization of Epidemic Prevention and Control

According to the data released by the Ministry of Education, at the beginning of the outbreak, a total of 1,454 colleges and universities across the country conducted online teaching, with a total of 12.26 million courses and a total of 2.3 billion people taking part in online teaching. From the data, it can be seen that most of the educational tasks can be accomplished through online teaching. At the same time, the once “marginalized” online education in colleges and universities has fully emerged through the epidemic with the advantages of diversified teaching forms, rich teaching contents and quality resource sharing. Another point that deserves our attention is that in the post-epidemic era, there is always the possibility of a sudden outbreak of the epidemic in local areas, which will become the main mode of teaching when the epidemic rebound. Therefore, online education in colleges and universities should not return to the cold phenomenon when the epidemic is under control, but it should make up for the shortage of offline education and respond to the need of the normalization of epidemic prevention and control [1].

2.2 The Development of Online Education in Colleges and Universities is the Rightful Way to Practice Social Responsibility

Yale University President Peter Sobel once said, “Universities create knowledge, share knowledge, nurture knowledge, and then share that knowledge with society, and universities in particular play an important role in research and teaching and in developing future leaders, which enables society to become more resilient and to meet more challenges.” This quote from Subed also explains what the social responsibility of universities is.

During the epidemic, online education basically fulfilled the responsibilities and missions of universities in teaching and other aspects. Universities strictly implement the advocacy of “listening to lectures without stopping learning” initiated by the Ministry of Education, and adopt video recording, live streaming on online platforms, catechism, online video conferencing and other forms to conduct large-scale online lectures. It breaks through the limitation of time and space, innovates the way of talent training, and breaks the traditional education method to adjust and upgrade rapidly. It has made efforts and contributions to provide more levels, wider and better quality education resources for the whole society. At the same time, it has solved the “classroom problem” during the epidemic and explored and improved the new paradigm of online teaching.

Breaking the “walled city” of universities allows people to learn all the time and everywhere. In the post-epidemic era, online education will continue to play an important role in teaching in universities. Combining the experience and achievements explored during the epidemic, it is important to improve the quality of online education and promote the new development of online education in universities by relying on artificial intelligence, big data information technology, cloud computing and other science and technology to continue to practice the social responsibility of universities [1].

2.3 The Development of Online Education in Colleges and Universities is an Innovative Move for the Reform of Teaching Mode in Colleges and Universities

The emergence of the epidemic objectively promotes the transformation of the education mode of colleges and universities. The previous online education will integrate and develop with the offline classroom teaching, accelerating the reform and innovation of the teaching mode of colleges and universities.

The development and evolution of online teaching in domestic colleges and universities have gone through three stages, which are Internet distance education, high-quality course construction and MOOC teaching. Distance education unfolded through the Internet successfully opened a new chapter of online teaching in domestic colleges and universities, and with the introduction of MOOC, online teaching in Chinese colleges and universities has made a new development [4]. 2020 was affected by the epidemic, and the wide application of online education in colleges and universities promoted a wave of disruptive innovation in traditional college teaching reform, which made a fundamental change in the traditional learning form in colleges and universities. It has forced universities to re-examine the traditional teaching methods from the perspective of Internet technology and change the mode of knowledge transfer in order to explore the initiative and effectiveness of students' learning. At the same time, online education provides a new platform and opportunity for exchange and cooperation among universities in different countries, and students can "sit" in the classroom of foreign universities and enjoy the teaching resources of foreign universities without stepping out of China. These changes will certainly trigger a comprehensive renewal of the traditional university education concept and system [5].

3 Realities of Online Education in Universities in the Post-epidemic Era

3.1 Emphasis on Implementation Process Rather than Educational Effect

Most of the current online teaching is a simple transfer of offline teaching contents to online, lacking targeted teaching design and teaching methods. Teachers pay more attention to the progress of the teaching plan in the online teaching process, but ignore the basic principle that teaching should be student-centered, and do not pay enough attention to whether students understand the knowledge content, whether they improve their thinking, and whether their spirit is satisfied in the classroom [2]. In addition, the online classroom lacks the learning atmosphere of the offline classroom, and the weak binding force causes the real problem of low learning efficiency and poor teaching effect [4].

3.2 Emphasis on Common Criteria Rather than Individual Indicators

The online classroom lacks face-to-face communication between teachers and students, so teachers cannot get timely feedback from students' demeanor and expressions, and thus cannot monitor students' learning process and effect in real time. Students' sense of

presence in the classroom is poor, and their communication with teachers and classmates is limited, sometimes creating a sense of tension and anxiety [4]. This results in teachers' inability to monitor teaching quality dynamically. In addition, students lack feedback channels and personalized problems are hidden. The online classroom restricts students' personalized and diversified development and eventually turns into "duck-fill teaching" [2].

3.3 Emphasis on Knowledge Transfer Rather than Literacy Enhancement

The quality education in China attaches importance to students' ideological and moral quality, personality development ability cultivation, physical health and mental health education. The school's educational environment and humanistic atmosphere all influence students' outlook on life, worldview and values in a subtle way. However, the current online education uses words, symbols, and emojis to replace face-to-face communication between people, and such long-distance communication is difficult to produce emotional resonance. This distant communication is difficult to create emotional resonance, resulting in a diluted emotion between teachers and students and a lack of communication between peers. The virtual environment of online education emphasizes more on the inculcation of knowledge level and lacks spiritual guidance, which is contrary to the original intention of quality education and is not conducive to the improvement of students' literacy [4].

4 The Practical Way Forward to Promote the High-Quality Development of Online Education in Colleges and Universities in the Post-epidemic Era

4.1 Online Education Technology: Optimization and Innovation

4.1.1 Optimization of Online Education Technology

During the COVID-19 outbreak, there was network congestion, network lag and dropped connections during classes, which directly affected students' online class experience and reduced learning efficiency. In addition, although the Internet penetration rate in China is increasing year by year, there are still many students in remote areas who have difficulties in using the Internet. Therefore, on the one hand, it is necessary to improve the online education platform of colleges and universities, promptly remedy the situation of poor online course experience caused by network lag, increase the capacity of network platform expansion, improve the carrying capacity of network platform, and improve the stability of online teaching. People are able to promote the new development of online education by relying on artificial intelligence, big data information technology, cloud computing and other science and technology in the area of colleges and universities. On the other hand, it is necessary to pay attention to minority groups and get out of the "digital divide" [2] dilemma. It gives full play to the advantages of 5G technology to provide technical guarantee for online education in colleges and universities by accelerating new infrastructure construction, improving network facilities in remote areas, and strengthening light coverage.

4.1.2 Innovations in Online Education Technology

To solve the problems of online education such as lack of communication between teachers and students, weak supervision and inability to track students' learning effect in real time, we can innovate online education technology and establish a perfect online learning supervision and intelligent feedback system. It can improve students' online learning supervision and management by using AI technologies such as voice recognition and face recognition. Also, it can monitor, track and intervene in students' learning process by using artificial intelligence as well as big data information technology. During the online teaching period, students are required to interact with connected IoT devices and other devices, and after the collection and analysis of big data in the background, timely feedback is given to teachers and students. The analysis of data helps teachers to customize personalized learning plans for students and to monitor and manage students precisely and effectively.

4.2 Traditional Teaching and Online Education in Universities: Complementarity and Integration

4.2.1 Complementary Traditional Teaching and Online Education

Although traditional teaching has the advantages of face-to-face communication between teachers and students; real-time tracking to grasp students' learning situation; and grasping the whole picture and discovering individualized problems. But there are also certain limitations. Students learn passively in the classroom, unable to take the initiative to expand their knowledge, as well as students' learning time and place are bounded and other problems. The diversified ways of online learning broaden the width and breadth of knowledge; they are no longer limited by time and space and can learn effectively according to their needs; and they enhance students' ability to learn independently, discover problems and solve them. Traditional teaching and online education complement each other to improve the quality of teaching and learning in colleges and universities and ensure the effectiveness of teaching [6].

4.2.2 Integration of Traditional Teaching and Online Education

The "rising tide" of online education in colleges and universities due to the epidemic has fully demonstrated the effective role of online education in teaching in colleges and universities, and also promoted the transformation of education mode. The integration of online education and traditional offline teaching in colleges and universities is a meaningful exploration, making college education return to the essence of education, attaching importance to human subjects, meeting the personalized needs of learners and stimulating learning motivation. The following suggestions are made to strengthen the integration development of online education and traditional offline teaching in colleges and universities: First, the status of online education in colleges and universities has to be improved. Online education in colleges and universities is no longer an "emergency product" or a supplement to traditional teaching, but should constitute the teaching system in the post-epidemic era together with traditional teaching [6]. Second, students-orientation has to be established as the fundamental principle. The concept, that students should be

the mainstay in judging the teaching quality of the integration of online education and traditional offline teaching in colleges and universities, and promote the all-round development of students, should be established. Third, online education with the construction of subjects and courses in traditional teaching has to be combined. It is necessary to increase the percentage of credits in online education. Teachers adjust the teaching content of offline teaching according to the actual situation of online teaching, so that online teaching and traditional teaching can be fully integrated.

4.3 Online Education Resources: Integration and Research and Development

4.3.1 Integration of Online Education Resources Should Be Integrated

In the process of integrating online education resources, colleges and universities should pay attention to the integration, so as to promote the sharing of high-quality education resources, improve the learning efficiency, enhance the learning effect and promote the reform of education. It is suggested to adopt the following ways to integrate education resources: Firstly, universities should build their own education resource system, actively establish their own education resource library, and integrate not only the existing online education resources within the university, but also the excellent online education resources at home and abroad [8]. Secondly, online education resources sharing mechanism among universities should be established. It can promote the fairness of education by building a public service platform of high-quality education resources [8]. Third, the protection of intellectual property rights of online education resources in the process of integration should be paid attention to. Initiative of scholars participating in the construction of online education resources should be protected from discouraging due to copyright issues [7].

4.3.2 Online Education Resource Development Should Focus on Features

Online education resources on the Internet are of mixed quality and not distinctive enough, and some online courses have a lot of duplicated contents. It is necessary to create more distinctive college online courses through overall teaching design innovation and concept innovation. The professional knowledge of college teachers and the problems arising in actual teaching can be utilized to create online education resources with characteristics oriented to subject specialties, courses and perfect knowledge structure of students [7].

4.4 Information Literacy of University Teachers: Cultivation and Development

4.4.1 Cultivation of Information Technology Literacy of College Teachers

The development of online education needs to achieve effective “teaching” of teachers and adequate “learning” of students, which puts forward further requirements for the cultivation of information technology literacy of college teachers [4]. To improve the informatization literacy of college teachers, we should start from the following aspects: Firstly, we should change the concept of informatization of college teachers. It is important to enhance teachers’ awareness of consciously learning information knowledge and

improve information sensitivity [9]; Second, we should innovate and improve the information training mode. Following the rules of various professional development stages, effective informatization training is carried out at different levels and categories, and multi-dimensional training is provided to build a team of informatization teachers in colleges and universities from online teaching skills, curriculum design and concept innovation [10].

4.4.2 Development of Information Literacy of University Teachers

The emergence of the epidemic has accelerated the wave of information technology advancement in education. In order to make college teachers comprehensively improve their informatization literacy, proficiently apply and share information, and also solve the problems in the development of informatization of college teachers to propose corresponding solutions. First, college teachers are guided and encouraged to use information teaching skills to innovate teaching methods and promote discipline construction. Second, the role of theory in the guidance of improving teachers' information literacy is strengthened by deepening the research on information literacy and focusing on practical problems.

4.5 Independent Learning and Self-management Ability of College Students: Construction and Enhancement

4.5.1 Building Excellence in Self-directed Learning for College Students

Online education provides a bigger platform for students to learn independently, and returns to the essence of education, which is based on students' "learning". In order to build the ability of independent learning for college students, first of all, students can be guided to establish ideals and clear motivation for learning. Form a firm belief in independent learning and make an effective learning plan. Secondly, students should be encouraged to form good independent learning habits. These methods, guiding students to clarify the content of learning, enhancing their sense of professional identity, actively exploring scientific learning methods suitable for their own characteristics and learning self-restraint, contribute to forming their good habits of self-need learning. Finally, a harmonious "learning community" is established for students. There are some problems in online teaching, such as lack of face-to-face communication and lack of sense of presence. Online teaching has problems such as lack of face-to-face communication and lack of sense of presence. In this regard, teachers need to participate in the whole process of students' learning, build a communication platform for students, strengthen the communication between teachers and students and between students, form learning groups, exchange learning feelings, supervise each other, and encourage each other. In this way, students will be motivated to develop the ability to excel in independent learning [4].

4.5.2 Enhancing the Strong Ability of Self-management of College Students

The effective implementation of online teaching places higher demands on self-management. On the one hand, an online teaching feedback system is established to

technically limit the occurrence of student absences and inattentiveness in class, and to provide proper guidance through online accompanying exams and conducting self-assessment and mutual evaluation. On the other hand, we provide students with online guidance related to their studies. Students are provided with answers to their study questions, they are helped to recognize their own shortcomings and to adjust their learning style at any time, and finally they are given a targeted study plan according to their own situation. In addition, through the online education method, students can get rid of the time and space limitations that exist in traditional teaching, and they can exercise self-restraint and self-management in learning, and arrange their study time and study contents reasonably, so as to achieve the effect of improving college students' self-management.

5 Conclusion

Online education in colleges and universities is a new paradigm of breaking the traditional education with AI technology, big data and cloud computing as the technical support, teachers as the main body and students as the main body to realize the sharing of educational resources [3]. In the post-epidemic era, the traditional form of online education in colleges and universities should be realized as soon as possible to emergency and then to the new normal transformation of the integration of online and offline teaching, giving full play to the respective advantages of online and offline education upgrading reform. In this paper, through the analysis of the theoretical implication of online education in colleges and universities, a reasonable practical progression is proposed. We hope that we can learn from the experience of online education and summarize the education methods, improve the effect of “online + offline” education mode, and make full use of online resources to find a better way to educate students [4].

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