The Development Strategy and Enlightenment of Education Technology in the UK under the Digital Background——Interpretation and Analysis Based on the Future Opportunities of Educational Technology

Xiarui Sun[1,*], Yuantao Jiang[2]

[1]Faculty of Education, Yunnan Normal University, Kunming, 650500, China
[2]Yunnan Education Cadre Training Center, Yunnan Normal University, Kunming, 650500, China
*Corresponding author: 1798282020@qq.com

Abstract: *Education holds an important position in the future development strategy of the UK. With the continuous development and maturity of global digital technology, its application in education has become more widespread, providing rich resources and diverse avenues for learning. This article analyzes the future development direction and path of educational technology proposed by the UK in the "Future Opportunities for Educational Technology" proposed in 2022, mainly focusing on analyzing the current situation of educational technology development in the UK, determining future development goals, and future development paths. Referring to the goals and strategies of promoting the development of educational technology in the UK, the development of digital technology in education in China should promote coordinated development among various departments; Pay attention to bridging the digital divide, enhancing digital inclusiveness, and enhancing teachers' digital skills.*

Keywords: *UK; Educational technology; Digitization*

1. Question raising

Since entering the 21st century, the world has been undergoing accelerated development and change, and education, as a subsystem of society, is also accelerating the reshaping of its new development pattern. The worldwide prevalence of the COVID-19 has changed the development pattern and operation mode of global education, accelerated the Digital transformation of education and the development of educational technology, and filled future education with new opportunities and challenges. In the context of digitalization, digital technology has gradually become popular and widely used in education. Teachers use digital technology to carry out teaching and daily work. In the process of using digital tools for teaching, teachers are required not only to improve teaching efficiency through technology, but also to deeply integrate technology with education, with education as the foundation, promote high-quality development through and with the help of technology, and thus form educational technology to serve and promote the adaptability and flexibility of education in the new era. In response to the trend of integrating technology and education, China has introduced relevant policies to support the continuous development of educational technology. Overall, These policies promote the digital development of education through information technology: in terms of infrastructure, strengthen the use of technological tools in education and teaching, and achieve a wider integration of information technology and education; In terms of digital literacy for teachers and students, through the construction of information resource platforms and resource sharing, we can increase the use of educational technology by teachers and students, thereby cultivating their technical and digital competence, and promoting the fair development of education and the steady improvement of educational quality. However, under the new background of Digital transformation, China's education informatization development still faces some challenges and problems. For example, the uneven development of educational informatization has limited the actual utilization efficiency of basic hardware equipment in rural and remote mountainous areas due to slow network speed and insufficient broadband, The underlying reason for teachers' insufficient application of information technology is their questioning of the proposition of "technology promotes learning"[1].In terms of the degree of use of digital resources, external factors such as the economy result in different access and use

of resources, leading to issues such as the "digital divide"[2].

In order to better solve existing problems, meet challenges, and achieve the goal of further development of China's future education informatization, it is of great significance to refer to and learn from advanced digital education reforms in the international community for the development of China's informatization. Therefore, this article starts with the strategy of promoting the use of educational technology in the UK, draws on experience, and lays the foundation for further promoting the development of educational informatization in China.

2. The Era Background of Promoting the Digital Development of Education in the UK

In the international context, from the earliest computer age to the development of digitalization, the education technology in the UK has always been in a leading position. The prevalence of COVID-19 caused unprecedented economic and social chaos, and had a profound impact on the learning and development of children and young people. Data shows that the education of 1 billion children in 186 countries has been disrupted. [3] However, although the pandemic has undoubtedly brought setbacks to health, education, and the broader economy, it has also created unforeseeable opportunities for digital technology in the UK. Throughout the UK education system, new or existing regulations have rapidly developed to ensure that school education can continue at home. This has shifted the educational environment from traditional face-to-face classrooms to online learning and communication, representing a potential accelerator for digital education progress and supporting long-term progress in integrating digital tools - from crisis response to a "re conceptualization" of the educational landscape. [4]

In terms of relevant policies, the UK has always focused on the development of educational technology, introduced relevant policies to support and promote the continuous updating of educational technology, and maintained its advantageous position and competitiveness in the international arena. In 2019, the UK Department of Education released "Realizing the Potential of Technology in Education: A Strategy for Education Providers and the Technology Industry", proposing to bridge the information physics gap through digital infrastructure construction, emphasizing the interconnection of the Internet among all schools in England; In terms of the use of educational technology, the UK has formed a teacher training system, promoting teachers' ability to use technology through continuous professional development, and launching online courses to promote the use of technology in teaching; In terms of educational digital resources, provide high-quality digital resources to all learners and develop a digital resource library. [5] In response to COVID-19, the British Ministry of Education released in 2021 "Getting Distance Education Assistance: Providing Teachers and School Administrators with Information, Guidance and Support on Distance Education Learning during the COVID-19", which proposed to provide school leaders and teachers with distance education kits and educational technology demonstration plans in response to changes in traditional teaching methods, Provide support and guarantee for teachers to effectively use technology in the education and teaching process. [6] With the normalization of the epidemic, the UK updated and released a new version of its' Digital Strategy 'in 2022, [7]compared to the seven major strategies focused on digital construction, skills, economy, government, and infrastructure transformation in 2017, the new version of the digital strategy focuses on six macro areas: digital foundation, creativity and intellectual property, talent cultivation and introduction, financial support, improvement of social services, and enhancement of the UK's international status, with stronger inclusivity and a wider scope. The aim is to integrate technology and digital policies, ensure that digital technology, infrastructure, and citizens' digital literacy promote national education progress and technological development in the coming years, maintain the UK's position as a technological powerhouse, and formulate specific strategies in some important areas, including artificial intelligence strategies. In order to achieve digital development in society and enhance the digital literacy of the entire population, the UK has started with education and improved the quality of education through the use of educational technology. In 2022, the UK proposed the "Future Opportunities for Educational Technology in the UK" to better understand the future of the UK's educational technology market and consider the potential development of digital technology and educational policies. [8]

3. Analysis of the Implementation Path of "Future Opportunities for Educational Technology" in the UK

First of all, we should pay attention to the democratic system and coordination among the various departments that provide educational technology. The development of educational technology involves multiple departments, with government departments responsible for formulating strategies and clarifying

directions. Schools mainly engage in the learning and use of technology, while educational technology developers are mainly responsible for the development of technology and obtaining relevant benefits. Promoting close connections between schools and colleges, educational technology departments, and representative organizations is an important priority for the future development of educational technology in the UK.

Secondly, pay attention to the subjects who use educational technology. In terms of educational managers, strengthen digital leadership. Education managers, as leaders in the development of schools, play an important role in the development of educational technology. If school administrators attach importance to educational technology, they will actively lead all members of the school to use and develop educational technology. In terms of teachers, it is necessary to establish their digital skills and confidence. Firstly, empower teachers with the ability to teach remotely to cope with changing environments; Secondly, provide practical training for teachers to improve their digital literacy, enabling them to use digital tools to implement differentiated and inclusive teaching, in order to support learners in using digital tools for education and improve learning efficiency; Thirdly, establish an educational technology exchange and learning platform, through mutual communication between teachers, to promote understanding and proficiency in educational technology, thereby enhancing confidence in educational technology. On the student side, pay attention to the inclusiveness of educational technology. Due to the influence of family economy and concepts, there is a digital gap between students. COVID-19 has widened the gap between digital tools and skills among students, which has exacerbated the inequity of education. Therefore, in the future development of educational technology, the UK will pay more attention to narrowing the digital divide, focusing on the inclusiveness of educational technology, and promoting fair development for all students. By conducting research on education managers, teachers, students, and their families to promote participants' understanding of educational technology, the UK hopes to win hearts and support from all educational participants, so as to achieve the future goals of educational technology.

Finally, pay attention to the rationality of the development of educational technology. Influenced by traditional educational methods, many teachers hold a skeptical attitude towards the ability of educational technology to promote teaching, and are therefore unwilling to accept emerging educational technologies. To address this issue, the UK will take evidence-based measures in the future to find a reasonable basis for implementing educational technology and increase its persuasiveness towards teachers and other participants.

4. The Enlightenment of "Future Opportunities of Educational Technology" on the Digital Construction of Education in China

4.1. Promote collaborative development among various departments

The main participating departments in the implementation process of educational technology include government departments, educational technology departments, and various levels and schools. Active cooperation and communication among various departments are necessary to promote the development of educational technology. The government department is mainly responsible for macro regulation and top-level design, formulating implementation strategies and clear directions, guiding the implementation of educational technology departments and schools, and regulating the fair development of educational technology in various regions and schools. The education technology department and schools are responsible for implementing the policies formulated by the government, thereby promoting the application of education technology. The Education Technology Department is mainly responsible for the research and development of education technology, and universities and research institutions are the main birthplaces of new theories, ideas, and technologies.[9] At the same time, the school is also responsible for communicating with the government and educational technology departments to raise confusion and practical teaching needs during the implementation process, in order to promote policy and technological improvement. Therefore, the digital development of education is a systematic undertaking led by the government and involving multiple stakeholders. Each stakeholder should have a clear division of labor, coordinate, communicate, and cooperate with each other to achieve common development and progress.

4.2. Pay attention to bridging the digital divide and enhancing digital inclusivity

In today's world, digital technology is rapidly developing, constantly driving profound changes and

major adjustments in various fields around the world, becoming an important means of continuous global development and progress. However, at the same time, the resulting digital divide problem cannot be ignored. Firstly, in terms of the digital access gap, the government should play a leading and leading role in strengthening the construction of information infrastructure in areas with weak educational technology. Government departments should increase network construction in remote areas such as rural areas to address the digital access gap. Secondly, in terms of the digital capability gap, easy to operate programs and simplified and understandable symbols should be formed to make educational technology more user-friendly. In education, most teachers are not professionals in technical research and have a fear of using complex programs and equipment. Therefore, researchers in educational technology should stand from the perspective of ordinary teachers and develop programs and devices that are easy for teachers to understand and operate, so that teachers can master and understand them, thereby increasing their confidence and interest in using digital technology in education and teaching. Finally, in terms of the digital output gap, strengthen technology investment in schools in areas with weak digital technology, while learning from schools with advanced educational technology.

4.3. Pay attention to improving teachers' digital skills

Teachers are the main personnel driving the implementation of education and teaching, and their digital technology application ability is related to the process and development of educational informatization. Therefore. Teachers need to combine digital technology with education and professional development, promote the development of teachers' digital competence, form personalized teaching styles, and achieve effective classroom management. Firstly, establish standards for teachers' digital skills and clarify the direction for improving digital literacy. There is no clear and actionable regulation on the educational technology that teachers should master in China, which leads to teachers not paying attention to the development of technology. Therefore, we should establish clear and actionable standards for teacher education technology, clarify their development points and basic requirements, and establish an assessment and evaluation system to promote their emphasis on education technology through the evaluation of their abilities, thereby generating positive guidance for the digital development of teachers. Secondly, create an intelligent school environment and cultivate teachers' digital awareness. Promote the construction of smart campuses and smart classrooms in schools, and create an immersive smart campus environment that allows teachers to frequently access and use educational technology equipment during the education and teaching process, thereby promoting their proficiency in equipment operation and understanding of the advantages of using digital resources, forming a positive attitude towards educational technology, continuously improving their digital literacy, and promoting their professional development. Finally, improve the post service development system for teachers and strengthen digital competency training for teachers. Firstly, in the digital training of teachers, it is necessary to combine training with daily education and teaching. On the one hand, it can stimulate teachers' enthusiasm to participate in training and promote the improvement of digital literacy; On the other hand, it is possible to strengthen teachers' emphasis on educational technology, thereby enhancing the integration of the use of educational technology in education and teaching. Secondly, in terms of training methods, attention should be paid to differentiated training. Teaching methods vary depending on the subject, and accordingly, there may be differences in the use of educational technology. Teachers in the same discipline have a better understanding of when to use educational technology in teaching activities, thereby optimizing the use of educational technology and improving teaching level through discussion. Thirdly, the training content should be designed from multiple perspectives and perspectives. In the training process, it is important to pay attention to the differences between teacher development and needs, provide personalized training plans, promote teacher mastery of basic skills, and thus enhance teacher digital competence.

5. Conclusion

The UK Department of Education pointed out in its "*Future Opportunities for Educational Technology*" that strengthening the effective application of digital technology in education and teaching can generally enhance the digital literacy of the UK population and promote the development of education, and also provide reference for the digital development of education in China. We should aware the importance of the educational technology and learn from others. So we can have improve in it and promote the quality of our education.

References

[1] Dong Yuqi, Bi Jinggang, Qian Songling, Bian Jiasheng, Qiao Peixin. Issues and Strategic Adjustments in the Development of Informationization in Basic Education [J]. Open Education Research, 2021, 27(04):50-58.

[2] Liu Ruiru. Looking at the Future of Education from the History of Electronic Education: Experience and Prospects of China's Education Informatization Development [N]. China Education Daily, 2019-12-02 (03).

[3] UNICEF. Coronavirus Global Response. Paris: UNICEF [R], 2019. https://www. unicef. org.

[4] OECD. Building Back Better: A Sustainable, Resilient Recovery after COVID-19. [R], 2020. https: // oecd. org/coronavirus/policy-responses/building-back-better-a-sustainable.

[5] Department for Education. Realising the Potential of Technology in Education: A Strategy for Education Providers and the Technology Industry [R]. 2021. https://www.gov.uk/ government/ organisations/department-for-education.

[6] Education Technology EdTech Survey [R], 2021. https://assets. publishing. service. gov. uk.

[7] UK Digital Strategy web accessible [R], 2022. https://assets.publishing.service.gov.uk.

[8] Future opportunities for education technology in England June [R]. 2022. https://assets.publishing.service.gov.uk

[9] Bian Jiasheng, Wang Jue, Xie Yueguang, et al. Technology Improvement Learning: A Review of the 5th Sino Japanese Forum on Educational Technology Research and Development [J]. Journal of Distance Education, 2015, 33(6):16-23.