Research on Smart Education Methods Based on the Perspective of "5G+AI"

Lingqun Zuo[1, *], Xiaoxia Xu[1], Qing Li[1], Chonghao Xu[1], Shan Wang[1]

[1]Qingdao Harbour Vocational & Technical College, Qingdao, Shandong, 266404, China

*Corresponding author Email: zuolingqun@163.com

Abstract

Smart education is the trend of modern education informatization, and it has received more and more attention around the world. In the process of smart education research, we should grasp smart education from multiple perspectives and promote the teaching reform in colleges and universities. Based on the basic concepts and characteristics of smart education, this paper expounds the necessity of teaching reform in colleges and universities under the environment of smart education, and finally puts forward the top-level design of improving teaching reform in the environment of smart education. Smart education not only It is the application of intelligent technology in education, and it is the comprehensive transformation and reform of education in the intelligent era. This paper puts forward suggestions for the practical implementation of the transformation and reform of smart education, A research method of smart education based on the perspective of "5G+AI" is proposed. Including establishing an ecosystem for seamless data flow, promoting the innovation of education public service models, and attaching great importance to professional education services.

Keywords

5G; AI; Education services.

1. Introduction

In recent years, the new generation of information technology such as artificial intelligence and 5G technology has promoted the transformation of traditional education into a smart education paradigm empowered by new generation information technology [1-3]. Smart education is changing from concept and model to implementation and practice, and is gradually moving towards large-scale development. The demand also calls for profound changes in the educational service model [4]. Relying on smart education to carry out teaching reform in colleges and universities will help to effectively improve the quality of education, cultivate innovative talents in the new era, and promote the leap-forward development and progress of education. The only way is the intelligent stage and process of exploring new things through computers. In short, intelligence is the ability to give a computer system or platform the ability to explore new things autonomously with the support of artificial intelligence technology [5]. Smart education can be understood as an educational system or educational behavior with high content adaptation and learning experience provided by countries, regions and schools. It is a teaching form that provides differentiated on-demand services and support services for teachers and students with the help of modern computer technology [6]. The teaching mode is the core of the smart education system and the key to guiding all the constituent elements, which can improve the quality and ability of knowledge production from the aspects of efficiency and effect [7]. It mainly includes various elements such as teaching environment, teaching philosophy, classroom, learning, teaching, students, teachers, etc. With the support of

information technology, the traditional teaching ecology is transformed and the teaching effectiveness is improved.

2. Definition of Smart Learner

Regarding the definition of smart learners, He Bin (2013) first proposed from the perspective of learners that smart learning is a new learning paradigm in which learners actively participate themselves and have a complete learning experience; Learning services and retrospective reflection on the complete learning process [8]. This definition clarifies that intelligent learners have the characteristics of autonomy and interaction. In addition, smart learners are inseparable from the smart environment, and people and technology have an interactive and mutually beneficial relationship. In the smart learning environment, learners use smart terminals to clarify the "wisdom" characteristics of smart learners, that is, from massive learning tasks and learning resources. It can efficiently and quickly find a solution that matches its own learning problem [9]. Wisdom education has three distinct characteristics, which are embodied in technical, resources and teaching. First, the technical characteristics. The technical characteristics can be discussed based on the microscopic and macroscopic dimensions. Based on the micro-dimension, the specific performance is to use smart education equipment to create a learning environment, to obtain students' learning characteristics through many platforms, and to fully perceive and timely adjust the key to learning. Based on the macro dimension, through the top-level design of smart campus construction and the deep integration of many networks, smart education has always implemented the advanced ideas of sharing and openness, and with the application of new technologies in education, resource construction truly presents new characteristics. Finally, teaching features [10]. In the new round of smart education development, it is no longer limited to classroom education space and time. Wisdom This reflects the ability of smart learners to continuously develop problem-oriented and result-oriented thinking and the optimization awareness of self-learning management. Since then, scholars have studied the connotation of intelligent learning ability from the perspective of ability. Han Jiaming (2019) pointed out that the intelligent learning ability of college teachers refers to the ability of learners to integrate into the intelligent learning environment, use intelligent learning tools to obtain information resources, process and use information to solve practical problems, and improve relevant knowledge skills and comprehensive quality [11]. Chen Meng (2020) pointed out that the intelligent learning ability of contemporary college students includes four levels: basic learning ability, ability to adapt and utilize the learning environment, meta-learning ability, and knowledge management ability [12].

3. Intelligent and Smart Education Transformation

Since the 1980s, the application of information technology in education has gone through more than 30 years, providing new opportunities for development. In the digital stage, the information technology represented by multimedia promotes the transformation of the main forms of educational media and resources from analog technologies such as radio and television to digital technologies [13]. The main role is reflected in the transformation of analog information to digital information, which improves work efficiency and teaching effect. The information technology represented by the Internet promotes the aggregation of digital educational resources through the network and realizes the popularization of high-quality resources. The intelligent stage refers to the new generation of information technology represented by artificial intelligence after entering the intelligent era, which promotes data mining and the realization of intelligent services in the education process, and moves towards a new era of intelligent education. The main role of information technology in this period is to actively realize the realization of intelligent education services and the education ecology.

In the current teaching model, data is no longer a one-way input and output; learners play an increasingly important role in the entire teaching development process [14]. Education is a specialized service, and the business involved in smart education is for students and learning. First, the intelligent distribution of educational resource information. In order for the participation model to work effectively, it is necessary to implement relevant education and guidance to smart learners, such as the development of teaching technology and the application of the latest teaching methods. This enhances learner engagement; the higher the learner's understanding of the learning process, the more demand is generated, which in turn facilitates the development of teaching. Smart education is mainly based on the efficient work of teachers and the effective learning of students [15]. The problem to be solved by smart services is the sharing and co-construction of digital resources. At the same time, it promotes the construction of public services in the educational resource system and maximizes education equity. In the current teaching ecological environment, smart learners should master the ability of self-discipline and awareness of prevention. The development and popularization of information technology has promoted the intelligent development of educational services in colleges and universities. Pay more attention to the selection of different learning resources, critically understand and interact with digital media to increase resistance to disinformation, and learn to develop lifestyles and learning styles that are conducive to lifelong progress to achieve better knowledge manage.

4. Conclusion

At present, my country's education informatization is in a critical period of transformation to smart education in the era of intelligence. The smart education system is rich in connotation and extensive in content, involving many elements such as system, teaching, and environment. There is a prominent contradiction between the demand for high-quality education and the provision of standardized, single-channel education services based on schools. In the transformation and reform of smart education, the application of smart technology will give full play to the different advantages of machines and humans to achieve human-machine collaboration; 5G and AI technologies need to be fully utilized, and accelerating the transformation and reform of smart education will significantly improve educational productivity. Provide better educational services for the public, so as to solve the core contradiction of education and break through the limit of educational growth. The development and popularization of smart education is the inevitable result of the development of information technology and scientific and technological progress, and it is also a realistic demand for the reform and development of education.

Acknowledgments

References

[1] Li Yukui Exploration and practice of improving the teaching quality of theoretical courses in secondary vocational schools with wisdom education [J] China training, 2021 (11): 34-35.

[2] Our news the two departments jointly launched the "5G + smart education" application pilot project [J] China education network, 2021 (11): 7.

[3] Liu Jinsong, Wang Hanzhi, Wang Yu, Shi Guangxing, Wang Mengqi. Practice and exploration of 5g + wisdom education in primary and secondary schools -- Taking Bao'an middle school (Group) experimental school as an example [J] China information technology education, 2021 (21): 68-70.

[4] Yang Yu, Ren Jie Research on online and offline mixed teaching mode in Colleges and universities from the perspective of intelligent education [C] / / Monograph on the exploration and practice of "two modernizations" teaching mode in the cultivation of talents in applied universities, 2021:63-67.

[5] Shen Jianwen Research on college translation teaching model from the perspective of "wisdom education" [J] Overseas English, 2021 (20): 62-63.

[6] Guo Haizhao Research on the path of improving college students' employability under the background of wisdom education [J] Employment of Chinese college students, 2021 (20): 44-47.

[7] Wang Lijia Research on the design and application of intelligent education cloud platform in Higher Vocational Colleges in Henan Province Based on the integration of industry and education and sudden epidemic [J] Journal of Henan Radio and Television University, 2021,34 (04): 9-15.

[8] He bin Intelligent learning: connotation, evolution and trend -- learners' perspective [J] Research on audio visual education, 2013034 (011): 24-33.

[9] Wang Shaofeng, Huang Ronghuai Generation mechanism and promotion strategy of online active learning intention[J]. Research on open education, 2020,26:147 (05): 101-112.

[10] Cui Yaqiang, et al Research on the understanding, connotation and practical approaches of intelligent teaching environment in Colleges and universities [J] China education informatization, 2020, (23): 13-17.

[11] Han Jiaming Research on the cultivation of lifelong learning ability from the perspective of intelligent learning [D] Yunnan University, 2019.

[12] Chen Mengqian, Peng Xilin Reconstruction of College Students' learning ability from the perspective of wisdom education [J] Higher education research, 2020 (7): 78-84.