

# Educational Response Method Based on Artificial Intelligence Perspective

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**Abstract:** *Mobile Internet technology is constantly improving, and its impact on people's daily life style continues to deepen. The rapid development of artificial intelligence technology has brought new opportunities and challenges to mankind, especially having a profound impact on education. This article uses qualitative research methods to conduct research and finds that the advent of the artificial intelligence era has caused major changes in education. Artificial intelligence technology provides new ideas for the development of education and points out new directions. Education and artificial intelligence are new cores. The integrated development of technology can provide data support for the scientific management of education, optimize the relationship between teachers and students, and promote personalized learning. Grabbing valuable information, establishing an education and teaching information resource database, and establishing an education and teaching effect evaluation mechanism based on big data are the countermeasures for education in the era of artificial intelligence.*

**Keywords:** *artificial intelligence, education, big data*

## 1. Introduction

With the rapid development of the mobile internet technology model, artificial intelligence technology has gradually entered people's daily lives and has increasingly played an important role. The Chinese government attaches great importance to the development and application of artificial intelligence technology, and has promulgated many policies and documents that are conducive to the development of artificial intelligence technology. The world's leading level; by 2030, artificial intelligence theory, technology and applications will generally reach the world's leading level. At the same time, it is required to set up artificial intelligence-related courses in primary and secondary schools, establish artificial intelligence colleges as soon as possible, and increase relevant doctoral and master enrollment [1]. It can be seen that artificial intelligence has risen to a national strategy, with the country's unified layout and overall development planning. In the future, artificial intelligence technology will be introduced more and more in education, teaching and education management.

## 2. The value change brought by artificial intelligence technology to education

### 2.1 Provide data support for scientific education management

For complex education issues, the scientific management of education must rely on accurate and reliable data, and the scientific decision-making of education management should be based on sufficient educational information and scientific data processing. Whether education management is reasonable or not depends on the extent to which it meets the needs of the educational subject[2]. Therefore, understanding the educational needs of the educational subject has become the key to scientific education management. Big data is an important source of information. Through accurate analysis of big data, it is possible to have a more comprehensive and in-depth understanding of the educational needs of educational subjects, thereby improving the accuracy of educational decision-making. It can be said that big data is an important medium for managers to understand the needs of educational subjects. Using big data technology to accurately record the growth footprint of students during their studies can not only provide the most abundant and detailed information for reasonable educational decision-making and management, but also provide data reference for understanding the growth of students. At the same time, the big data platform more comprehensively

reflects the learning and life of students. Detailed data can better promote parents to care about their children's growth and school education, effectively promote home-school interaction, and narrow the distance between children and parents. The distance between the school and the parents is conducive to the academic development of students and the improvement of the quality of school education and teaching. It can effectively form a good atmosphere of family-school integration and cooperative education, serving scientific education management.

Only by fully tapping and utilizing the internal and external resources of the education system can we better achieve the educational goals. "Under the background of education big data, massive data resources make education decision-making and education management well-documented and rule-based. Improve school infrastructure, establish class files and growth files, record children's learning and personality characteristics, and use big data the collection, transmission, aggregation and quantitative analysis of various types of children's data by technology can provide effective decision-making support for educational decision-makers and promote the scientific decision-making of education." With the help of big data analysis, students' learning processes can be discovered in a timely and accurate manner. In order to find out the weak links of education management, solve the problems in a purposeful manner. Education should not only focus on children's studies, but also cultivate their healthy physical and mental state and positive attitude towards life, so that they can receive education happily[3]. Based on the timeliness and forward-looking nature of education big data management, the weak points of school teaching management can be improved, and the leading role of education can be effectively strengthened.

Educational resources are the basis for the implementation of teaching and learning. The emergence of big data provides new ideas for the construction, sharing and use of educational resources, enabling teachers and students to share high-quality resources stored on the cloud server. Big data technology can push resources suitable for children's learning and teachers' teaching according to the learning dynamics of learners, teachers' teaching conditions and the dynamic demand for various resources. The balanced allocation of resources is the basis for the balanced development of regional education. The full use of big data can make up for the unbalanced allocation of resources, meet the individual development needs of different schools, teachers, and students, so that students in remote areas can also be personalized education and feel the gospel brought by information technology. In addition to reflecting the intuitive educational phenomenon, big data in the education field can also reveal the meaning behind it. Analyzing these data can more accurately grasp the current situation and trends of education development, and enable resource allocation to be supported by objective data, so as to better promote the balanced development of education.

## ***2.2 Optimize the teacher-student relationship and change the role of teachers***

Intelligent education promotes a fairer education process. The traditional education process is considered to be a "subject-object" bipolar model in which the "educator" and the "educated" interact with each other. In the traditional education process, teachers occupy a dominant position and have "monopoly" authority. For students, due to the low participation in the education process, their learning knowledge is passively accepted, so it is difficult to guarantee the fairness and justice of education. In the era of artificial intelligence, the intelligence of education is manifested in the teaching process of teachers as an alternative to course teaching, review plans, case analysis, and even educational intelligent robots will realize human-computer interaction in the classroom. The rapid use of computers and other intelligent terminal equipment in the education process, especially the migration of many university courses to network-based teaching, has renewed the interest of educators in non-traditional curriculum design and teaching methods[4]. At present, the intellectualization of education has been relatively easy in the process of correcting examination papers. People may be most concerned about the process of grading subjective questions by artificial intelligence assistants. For example: for the correction of college entrance examination composition, people doubt whether there will be deviations in the intelligent correction. Because according to the usual logic, intelligent correction is embedded with an algorithm program that refers to the answer, and it is impossible to make fair corrections to "alternative" essays. But in fact, subjective topics including composition will be screened and analyzed by artificial intelligence assistants, and then reminded by manual scoring teachers to re-evaluate them to further ensure the fairness of the exam. With the help of intelligent scoring system, work efficiency can be improved to a certain extent. In addition, educational intelligence can quickly identify students with weak foundations in the learning process, and accurately assign such students to collaborative groups, and finally make quick and targeted responses to summarized problems. These technical assistance will further enhance the learning self-confidence of students with weak learning foundations,

and then make up for some injustices caused by differences in academic performance in the education process. At the same time, the process of educational intelligence can not only realize the automation of daily teaching tasks, assist in teaching, improve teachers' creative activities, but also create conditions for teachers to set aside more time to realize free teaching activities and help realize the effective teaching activities. The intelligent combing of management and work procedures further promotes the fairness and justice of the education process.

The continuous integration of smart technology and education will also promote the transformation of the role of teachers and promote equal dialogue between teachers and students; at the same time, it will expand the time and space of teacher-student communication, enhance the multi-dimensional interaction between teachers and students, and then optimize the teacher-student relationship. The specific manifestations are as follows: First, teachers pay more attention to the spiritual development of students and enhance the equal dialogue between teachers and students. The role of teachers will change. Artificial intelligence will play an important role in the knowledge teaching role of teachers. At the same time, the educating role of teachers embodying the warmth of education will become more valuable. The role of the teacher will shift to the leader of beliefs and values, the instructor and companion of personalized learning, and the care of emotions. This change has prompted teachers to always pay attention to the spiritual growth and emotional needs of students, and patiently listen to the inner voices of students. More attention and listening means more understanding and respect, and at the same time, it can enhance the equal dialogue between teachers and students. Second, broaden the space-time boundaries of teacher-student interactions and deepen the multidimensional interaction between teachers and students. Traditional teacher-student interactions are mostly limited to a fixed time and place, that is, mostly in classrooms and classrooms. The "ubiquitous education" brought about by artificial intelligence technology will break the traditional communication model between teachers and students. The emergence of online classrooms such as MOOCs expands the educational location from the school to the virtual space, and the time for students to receive education has expanded from a fixed class time to a more flexible time[5]. As a result, the space-time boundaries of teacher-student interaction will be expanded.

### ***2.3 Promote the individualization of students' learning***

Artificial intelligence technology promotes the development of education in the direction of individualization and customization, and therefore affects the development of education in the direction of customization and precision, and promotes personalized learning. The specific manifestations are as follows: First of all, artificial intelligence can clarify the individual needs of students and promote individualized learning. In traditional teaching, a teacher teaches the same content, ignoring the individual differences and individual needs of students[6]. However, the application of smart technology can further clarify the individual differences of students. Strengthening the education process through technology, relying on learning analysis technology can tap the unique potential of each student according to the changes in students' intelligence characteristics, construct a learning path for students, and provide convenient interactive services and development platforms. "Wearing watches, voice recognition and eye tracking and other data capture devices can capture students' physiological and behavioral data, so as to obtain students' emotional state and learning attention data." Fine-grained analysis of data can help educators understand the individual differences of students. Systems such as intelligent virtual assistants, learning guidance systems, and learning platforms can create courses suitable for students' physical and mental development and growth according to their personal characteristics such as learning style, preference, and concentration. At the same time, the adaptive learning system supports education to match the corresponding learning resources and create an environment to promote personalized learning. Secondly, students can study independently anytime and anywhere. The educational virtual community can provide a platform for teachers and students to communicate with each other frankly. Students can care for their friends in the community and cultivate their interpersonal skills. Schools can use intelligent technology to create problem situations, match students with peers, and other auxiliary measures to cultivate students' cooperative ability. Using VR technology to construct a real situation can promote the development of students' judgment ability. The learning environment created by technological means will break through the traditional space-time scope of education with the popularization of technology. Just as computer terminals and intelligent service systems store corresponding educational resources, students can extract educational content anytime and anywhere. Artificial intelligence has broken through traditional learning in learning methods, resources and content, and will be more conducive to independent education of students.

### **3. Changes in the direction of education brought about by the era of artificial intelligence**

#### ***3.1 Grab valuable information in the education and teaching process***

Serving high-quality educational development with high-quality data, major decision-making in education requires big data analysis to provide a comprehensive and reliable source of information. The quality of data and its rational use directly affect the quality of education. The application of big data to education can start from the core indicators at a macro level, pay attention to the problems in the development of key areas of education, effectively improve the current situation of large differences in the allocation of educational resources, and promote the balanced and effective allocation of urban and rural resources; at the micro level, it can be from students, students, teachers and managers conduct corresponding data collection from the perspectives of learners, such as collecting learners' learning motivation, learning expectations, learning conditions and effects, teachers' curriculum teaching plans, expected goals, teaching effects, managers' management plans, expected effects, and actual effect, teaching resource library, etc[7].

Big data is a resource as well as a tool. Grabbing valuable data in the education process is a difficult problem faced by artificial intelligence in the education field. Valuable educational data contains three elements: One is the authenticity of the data. The second is the continuous update of data. The third is the trend of high granularity, high frequency and other details presented by the data. To this end, educators should clearly select data standards based on the characteristics of education. Education has its inherent characteristics, and corresponding data should be collected based on the characteristics of education. The significance of data is not only that it is a representation of the development of education, but also that with the construction of big data, data management has solved many educational problems and greatly improved the level of education governance. The combination of big data and education is the inevitable trend of the development of the times: student training can take into account both scale and individualization at the same time, and educational decision-making will also be more scientific.

#### ***3.2 Establish an education and teaching information resource database based on big data analysis***

Big data intelligence is profoundly changing every aspect of society. It is necessary to implement an innovation-driven development strategic action plan led by big data intelligence, to deeply explore the value of big data, so that big data intelligence can better empower education. The value of big data is not limited to having huge data, it is also able to conduct in-depth data mining. The in-depth and sustainable development of education requires the establishment of an education and teaching information resource database based on big data analysis[8]. Of course, the construction of the education and teaching information resource database should be based on educational practice, collect the dynamic content that teachers and students are interested in and need, and supplement and improve the information in the database in a targeted manner.

In addition to a large amount of funding to construct an education and teaching information resource database, technical issues are also critical. Currently, governments at all levels have adopted various measures to promote the use of big data. For example, the government has increased the intensity of special training for education managers and teachers to make them familiar with the use of relevant education data. China has a huge space for the mining of educational data, which requires governments at all levels to pay attention and actively respond. First, it is necessary to increase the support of special funds for the education and teaching information resource database. The establishment and operation of the education and teaching big data information database requires a large amount of funding[9]. The government is the main undertaker of the construction of the education big data information database. Governments at all levels should strengthen the effectiveness of the construction of education and teaching data and participate in the construction, and make sufficient funds. It is used for the construction and use of education and teaching data information resource database. Second, in order to quickly promote the construction of information databases, giant companies in the Internet industry should be encouraged to use their advantages in big data to actively participate in the collection of big data and related data analysis. Third, set up statistical indicators to monitor the development of high-quality education based on educational development goals. The data system developed should connect the data collected by the state with the data content of students and educators. In order to give full play to the role of artificial intelligence, a nationwide education big data artificial intelligence use system should be established to promote the effectiveness of teaching and learning, improve the quality control system, realize dynamic quality management, and promote

scientific decision-making in education.

### **3.3 Establish an education and teaching effect evaluation mechanism based on big data**

In the pre-artificial intelligence stage, how the effect of education and teaching depends on the researcher's existing knowledge reserves and practical experience to make judgments and evaluations on the collected information, which will affect the scientificity and persuasiveness of education evaluation to a certain extent. With the deep integration of artificial intelligence technology and education management practices, the processing of education evaluation information in the future will increasingly rely on intelligent systems. Based on the knowledge and experience of many experts in the education field implanted into the foundation of the program system, artificial intelligence technology is used for reasoning and judgment, and the decision-making process of education experts can be simulated, and more scientific, authoritative and accurate education evaluation results can be obtained.

The establishment of an education and teaching effect evaluation mechanism based on big data is to give full play to the effect of education based on big data, including the design of evaluation indicators and the establishment of special analysis institutions to standardize evaluation methods. The establishment of an educational effect evaluation mechanism has the following advantages: First, it can improve the management ability of managers, change the one-sided situation that may have been caused by teachers' single reporting of teaching effects in the past, and provide educational managers with an increase from "experience-based decision-making" to "use of data" a more scientific decision-making level of "decision-making" and "management with data". Secondly, through the establishment of a big data education and teaching effect evaluation mechanism, the supply, distribution, use and evaluation of education data are guaranteed. Through real and reliable data to reflect the effect of education and clarify the existing problems, it can make managers have a scientific basis for reflection and improvement, and promote the improvement of the quality of education and teaching. Third, the resource allocation of education and teaching can be optimized. The education and teaching effect evaluation mechanism based on big data makes the education resources in an optimal configuration state, and enables the education and teaching resources to be allocated and used rationally. Establishing a scientific and standardized education and teaching effect evaluation mechanism based on big data is an important means to reduce public power risks and ensure the decision-making and execution power of educational policy systems. It can promote education to actively adapt to the needs of economic and social development and the overall development of people. The process of high-quality education development is brought into the track of effective operation.

## **4. Conclusion**

Education is the education of the human soul, not the accumulation of intellectual knowledge and understanding. Education in the future intelligent era is a kind of education that "takes people as the subject", and human-specific things such as teaching behavior and emotions should be given great attention. Intelligent technology provides new technical support for the transformation of educational goals. For example, intelligent auxiliary systems and educational robots can coordinate the work of teachers in the teaching process of procedural, memory or repeated practice. Schools and teachers will have more time and energy to guide students' creativity, understanding, imagination, and emotional development. The value of education in the era of artificial intelligence cannot be replaced. With the help of artificial intelligence technology, schools will help achieve the goal of education. As a powerful learning tool, artificial intelligence is an unavoidable choice for every individual. The form of getting along with AI day and night will bring opportunities to education.

## **References**

- [1] Xaligov A . *From the experience in applying the principle of accountability in quality management of the school*[J]. *Azerbaijan Journal of Educational Studies*, 2019, 686(686):171-182.
- [2] Keevers, Lynne, Maree. *Practices to improve collaboration by reconfiguring boundaries in transnational education*[J]. *Journal of University Teaching & Learning Practice*, 2019, 16(2):11-11.
- [3] Danchenok L V , Zaytseva A S , Komleva N V . *Transformation of the model of additional education in a digital economy*[J]. *Open Education*, 2019, 23(1):34-45.
- [4] Senol H , Dagli G . *Increasing service quality in education: Views of principals and teachers*[J]. *Eurasia Journal of Mathematics Science & Technology Education*, 2017, 13(8):4857-4871.

- [5] Pluzhnik I L , F. H. A. Guiral. *Modelling a High Quality Education for International Students*[J]. *The Education and science journal*, 2020, 22(6):49-73.
- [6] Aleksandrova O , Hrozyi I , Vinnikova N , et al. *Control of the quality assurance system at the modern Ukrainian university*[J]. *Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu*, 2019(2):153-162.
- [7] Almudara S B . *Total Quality Management to reduce cost and To Improve Quality Process in Education Institution*[J]. *International Journal of Educational Research Review*, 2018, 3(2):23-29.
- [8] Bethel E . *Open Textbooks: Quality and Relevance for Postsecondary Study in The Bahamas*[J]. *International Review of Research in Open and Distance Learning*, 2020, 21(2):61-80.
- [9] Galtseva T , Svitich S , Kutsiy A , et al. *Education for Sustainable Development in the Value System of Teachers*[J]. *European Journal of Sustainable Development*, 2020, 9(4):147-156.