

Model Construction of Chinese Language Teaching from the Perspective of Artificial Intelligence

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Abstract: With the evolution of the information age, artificial intelligence has become an important variable affecting future social development, and its educational value has been widely recognized. In 2018, the Ministry of Education's "Education Informatization 2.0 Action Plan" put forward higher requirements for teaching informatization. The integration of artificial intelligence and education is the only way to improve teaching quality and cultivate talents that adapt to the development of the times. The core of educational informatization is the intelligence of teaching, which makes teaching methods intelligent, educational communication intelligent, and teaching methods technological. In view of this, firstly, the basic characteristics of the teaching information model were analyzed; Secondly, the application of the Chinese language information model was analyzed; Once again, the implementation of the Chinese language information model was analyzed to explore the opportunities and challenges faced by improving the application of artificial intelligence; Finally, from the perspectives of schools and teachers, strategies and suggestions are proposed to improve Chinese language education and teaching from the perspective of artificial intelligence.

Keywords: Artificial Intelligence; Educational Information Model; Teaching of Language and Literature.

1. Introduction

In the era of artificial intelligence, educational informatization models have unique advantages such as breaking spatial limitations, spreading quickly, and presenting in various ways. They will eventually become a strong support in building multiple learning environments, interacting in multiple spaces, and promoting lifelong learning for people. At the same time, they will bring about a significant improvement in the scientific decision-making and comprehensive governance efficiency of education. In the new era, China's education reform and development strategy, as well as the construction of a strong human resources country, cannot be separated from the guidance of educational informatization. The National Medium - and Long Term Education Reform and Development Plan Outline (2010-2020) issued by the Ministry of Education in July 2010 (hereinafter referred to as the "Plan") specifies the specific requirements for accelerating the process of educational informatization[1]. The Ministry of Education issued the "Ten Year Development Plan for Education Informatization (2011-2020)" in 2012, which clearly stated the "development task of integrating information technology with basic education and the goal of cultivating innovative talents"[2].

2. Characteristics of Educational Information Model

The Educational Information Model, abbreviated as EIM, focuses on establishing a comprehensive, meaningful, and authentic database for collecting and summarizing data related to students' learning and development in education. The classification of Chinese education information models in EIM models mainly includes curriculum design models, curriculum implementation models, curriculum outcome prediction models, personalized examination models, and management models. The establishment of these models is in line with the actual situation of students. The EIM model

helps teachers, students, and parents obtain specific information about these educations, integrate student growth and development information, and build an educational model that facilitates all parties to grasp students' academic situations at any time and share them anytime, anywhere. On the basis of digitization, students' personal educational information is constantly updated and enriched as they learn and grow. The Chinese language education information model is not only applicable to students' basic education stage, but also to students' vocational education stage, higher education stage, etc. It provides a visual platform for all parties involved in student growth, such as students themselves, teachers, parents, etc.

(1) Visualization and Coordination

The visualization of EIM is based on the collected data about students' learning situation and development changes, and then displays these data in front of people's eyes. Education personnel no longer need to use traditional methods for analysis. At the same time, it not only perfectly displays students' learning achievements, but also shows the interaction and feedback of different disciplines, which is more three-dimensional, vivid, and visual than the traditional education industry. Its visualization can be presented throughout the entire learning cycle of students, making the entire process of students' learning development from basic education to vocational education and higher education more closely connected.

In the process of establishing an educational information model, coordination and cooperation from all parties involved are required. If students are found to have academic difficulties in different subjects, EIM will generate information and provide data to participants in a timely manner to avoid delays in obtaining information and poor communication between different participants, which may result in the inability to solve students' problems in a timely manner.

(2) Precision and Optimization

Learning situation analysis is an important basis for

teaching design, such as analyzing students' basic learning situations, learning methods, learning attitudes, and gender and personality differences and similarities. Under the traditional mode, learning situation analysis often targets weaker students. However, data based learning behavior analysis and intelligent recognition can analyze students' existing knowledge level and recent development zone, making teachers' teaching designs more in line with students' actual development, effectively helping students gain more in learning, and improving the quality of teachers' teaching.

EIM provides people with continuous improvement data needed in practical teaching, which involves teacher's instructional design, student's learning outcomes, and other aspects. The important content of improvement and update is to grasp educational information, which is conducive to grasping teaching and learning information, and also provides optimization possibilities for complex teaching and learning information. For example, when studying Su Shi's work "Records of Shizhongshan", it was found that students were more interested in Su Shi's life journey from the collected information data. Therefore, the design of this course can change the traditional "understanding people and discussing the world" as the first part of classroom teaching, starting from Su Shi's different life and fully guiding students to participate in classroom learning. Based on the analysis results, the reasonable optimization of teaching design while ensuring the satisfaction of basic teaching, thereby improving the quality of classroom teaching, highlights the advantages of EIM technology in the field of education.

3. Application of Chinese Information Model

The construction of a Chinese language information model enables teachers to obtain comprehensive learning data, which is of great significance for personalized analysis of students and proposing targeted teaching strategies.

(1) Personalized analysis

The personalized education model meets the language skill learning needs of "listening, speaking, reading, and writing" in Chinese language teaching. The model system introduces teaching scenarios based on the laws of language learning, providing learning functions such as hierarchical diagnosis, hierarchical learning, upgrade assessment, specialized training, and simulation testing. The system can automatically score and provide feedback guidance, comprehensively improving learners' language proficiency. This increases interactivity and fun, helps students engage in personalized learning, and significantly improves learning efficiency.

At the same time, personalized learning manuals and paper assignments have been innovated. This is a personalized learning plan based on regular school learning data analysis, which will not change students' paper learning habits and can enable students to accurately identify their weaknesses in learning through big data. On the basis of sorting out the wrong questions, generate independent and personalized learning plans and suitable course resources for each student. Students can strengthen and solve learning problems in a timely manner, improve learning efficiency, enhance academic performance, assist schools at all levels in learning, and improve teaching efficiency. Implementing the practice of correcting mistakes in one corner and three reversals, facilitating students to consolidate their knowledge, solving problems in learning, promoting students to more efficiently

grasp the knowledge they have learned, and making school management a reality.

(2) Lesson plan argumentation

For teachers, accurate analysis of learning situations, hierarchical and dynamic teaching objectives, based on teacher lesson plan design and class learning situations, the system automatically generates simulated ideal teaching effects, which facilitates teachers to predict the teaching results in advance and make effective adjustments. Teachers can understand the feasibility and effectiveness of lesson plans, and even the details of the curriculum, helping them quickly find accurate teaching design plans and analyze and handle problems in a timely, convenient, and efficient manner. For example, when we are studying the article "Pipa Xing" in the first semester of high school, the difficulty for students lies in understanding and memorizing the text through data analysis. At this time, we should adjust the lesson plan and make targeted measures. In addition, this database not only stores the learning information analysis of students in this class and level, but also allows for the overlay and comparison of previous data in order to obtain more suitable teaching plans for students. Of course, students are developing individuals, and those with potential will gain new knowledge and skills through self-directed learning, collaborative exploration, problem-solving, and feedback during the learning process. At this point, educational information models will track students.

4. Exploring the Opportunities Faced by Chinese Language Teaching from the Perspective of Educational Information Model Construction

(1) Improving Chinese language classroom teaching and enhancing the efficiency of Chinese language classroom teaching

The use of educational information models is of great significance for improving Chinese language classroom teaching, enriching teaching methods, and transforming teaching approaches. From the perspective of teaching content, the educational information model realizes the sharing of educational resources, which helps to enrich teaching resources. The "Compulsory Education Chinese Language Curriculum Standards (2022 Edition)" points out that the teaching content of "the theme and carrier form of Chinese language curriculum content: excellent traditional Chinese culture, revolutionary culture, and advanced socialist culture" fully reflects the inevitable requirements of the three cultures. [3]By using the educational informatization model, teachers can timely and conveniently access necessary teaching resources, expanding their avenues for obtaining teaching resources. From the perspective of educational methods, educational information models are conducive to the transformation of educational methods, promoting the gradual shift of Chinese language education from teacher centered to student-centered, and enhancing the attractiveness of ethnic language education to students.

(2) Implementing the fundamental task of cultivating moral character and nurturing students' core subject literacy

The cultivation of moral character in Chinese language curriculum is an important task. "The teaching content of Chinese language subject contains profound cultural connotations such as Chinese language, writing, articles, and literature. The specific subject content determines its

important position and role in the cultivation of moral character in Chinese language curriculum." [4]In the 2022 version of the Chinese language curriculum standards, the definition of the core literacy cultivated in compulsory education Chinese language curriculum is: "Students accumulate, construct, and express themselves in real language application situations through active Chinese language practice activities, which is a comprehensive reflection of cultural confidence, language application, thinking ability, and aesthetic creation[5].

(3) Strengthen interdisciplinary and cross media learning

In the new century, in order to adapt to globalization, countries around the world are trying to enhance their competitiveness through educational reforms. Taking the United States as an example, in 2010, the United States released the Common Core State Standards for English Language Arts, which broke through the traditional sequential knowledge system, emphasized task orientation, and guided students to improve their listening, speaking, reading, and writing abilities in practical applications. By reading practical text types, different expression purposes, objects, and characteristics can be clarified to better meet students' future learning and employment needs[6]. Educational information modeling can better achieve personalized teaching and adapt to the demand for talents in the 21st century. China is in a new stage of transformation from a production country to a creation country. To cultivate all-round development talents, emphasis should be placed on the integration and accommodation of mother tongue teaching and other disciplines. Various countries around the world are exploring interdisciplinary learning. For example, Finland released the National Core Curriculum for Basic Education in 2014, which clearly defines interdisciplinary learning as one aspect of the curriculum standards and proposes seven cross disciplinary abilities, namely "the ability to think and learn; the ability to culture, communicate, and express; the ability to take care of oneself, manage daily life; multimodal literacy; and ICT related abilities; Work and entrepreneurial abilities; The ability to participate and create a sustainable future[7].

5. Exploring the Challenges Faced by Chinese Language Teaching from the Perspective of Educational Information Model Construction

(1) The accuracy of educational information models in tracking students' academic performance

The construction of a personal education information model for students relies on all basic data of their academic situation, such as timely input of test scores and daily exercises. If data construction is not carried out in a timely manner, data discrepancies may occur, which will affect the accurate analysis of the data.

(2) The efficiency of learning outcomes in the implementation of online courses

In the implementation process of online courses in the education information model, how to ensure the actual learning effect and high efficiency has become an important issue. The mixed network information has an impact on students' values, and how to help students select network information has become a challenge. At the same time, due to the untouchability of the internet, face-to-face communication and interaction are not possible. It is necessary to ensure that students can concentrate during

online learning, otherwise it will affect the learning effectiveness of Chinese language classes.

(3) Excessive reliance on artificial intelligence affects teaching effectiveness

Artificial intelligence has made teaching more convenient, but it has also shown some drawbacks. For example, in lesson preparation, online education models can directly provide matching resources to teachers as a reference for their lesson preparation. As a result, some teachers rely on matching resources and no longer rely on themselves to carefully read texts, analyze teaching points, etc. Chinese language class is a course that requires a correct understanding of the text and classroom discussions. Although the educational model may match the most suitable teaching design, students are developing and changing people, and classroom situations are also constantly changing. If teachers do not truly study the text, they will be unable to resist the doubts and difficulties raised by students, causing them to no longer trust the teacher. In addition, some teachers place too much emphasis on the teaching form of informatization, with a problem of prioritizing technology over content, and their understanding of knowledge is superficial.

(4) Teachers' own information literacy urgently needs to be improved

Nowadays, the development of artificial intelligence has put forward higher requirements for teachers' information and application abilities. Especially for some older teachers with weak information literacy, and in many grassroots primary and secondary schools where older teachers make up the majority, how to effectively utilize information technology to efficiently carry out teaching activities has become an urgent problem to be solved. In addition, some teachers have misunderstandings about the deep integration of artificial intelligence and teaching. For example, they believe that the deep integration of artificial intelligence and teaching lies in the use of multimedia textbooks for teaching. Some teachers even forget to take notes, ask questions, and use other traditional teaching methods on the blackboard. Similar misconceptions run counter to the original intention of using artificial intelligence for teaching. Over time, teachers not only fail to utilize the power of artificial intelligence, but also fail to construct efficient Chinese language classrooms.

6. Conclusion

(1) Establish sound systems for the integration of artificial intelligence and education, and strengthen the development and utilization of curriculum resources

To make reasonable use of artificial intelligence, build educational information models, and promote the development of science and technology for the benefit of humanity, it is necessary to establish management systems to ensure their efficient and safe operation. The education information model is based on network operation, and the security of education information data is an issue that needs to be considered. To ensure privacy and data security, in addition to strengthening its own technology, it also requires support from relevant laws and regulations. Overall, course resources refer to all the conditions and materials that can be used for teaching activities to promote better teaching outcomes. The "Compulsory Education Chinese Language Curriculum Standards (2022 Edition)" points out that "the development and utilization of curriculum resources include: adhering to goal orientation, selecting high-quality curriculum resources; mobilizing diverse subjects, enriching

the types of curriculum resources; establishing a cooperative development mechanism to achieve the co construction and sharing of curriculum resources; fully exerting the educational function of curriculum resources, optimizing teaching and learning activities." New requirements are put forward for the development and utilization of curriculum resources. School teachers need to improve their awareness of curriculum resource development, pay attention to the mining and accumulation of curriculum resources, actively use the sharing platform built by educational information models, enhance cooperation awareness, and realize the co construction and sharing of curriculum resources inside and outside the school, as well as between the school and society.

(2) Expand teacher training paths, improve the quality of teacher training, enhance the teaching research ability and information literacy of Chinese language teachers

Thought is the prerequisite for action implementation. Firstly, teachers should enhance their awareness of learning and responsibility. Chinese language teachers should cultivate good reading habits and continuously enrich their knowledge in education, literature, psychology, and other fields. At the same time, they should consciously accumulate excellent traditional Chinese culture, improve their cultural cultivation, and accumulate rich cultural heritage. Secondly, teacher training at all levels should be based on the characteristics of the Chinese language subject and the growth and development needs of teachers to determine training objectives, select content, and stimulate teacher enthusiasm, such as using case-based, experiential, and blended online and offline training. Finally, teachers should consciously and continuously improve their knowledge and technology application abilities, shape their concepts of learning

knowledge in the learning process, and make information technology an effective tool for improving classroom teaching efficiency.

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