

# Artificial Intelligence Application in Primary School Classroom Teaching

**Zongzhou Li**

Xi'an International University, Xi'an, Shaanxi, 710000, China

**Abstract:** With the advent of the information age, information has become an indispensable component of people's daily lives, thereby driving education towards informatization as its core developmental direction. The advancement of informatization has not only introduced innovative teaching concepts but also revolutionized traditional teaching models. In contemporary education, the integration of modern information technology with educational practices has emerged as an inevitable prerequisite for the development of primary school Chinese courses. In primary school Chinese teaching, teachers should actively apply artificial intelligence and conduct in-depth exploration of classroom teaching strategies to promote the development of primary school Chinese courses. This paper analyzes and summarizes the current situation of artificial intelligence in the actual application process of primary school classrooms, explores new strategies for applying artificial intelligence in primary school Chinese teaching, and enhances teachers' attention to artificial intelligence.

**Keywords:** Artificial Intelligence; Primary School; Teaching Strategies

**DOI:**10.12417/3029-2328.26.02.014

## Introduction

With the improvement of China's national strength and the state's emphasis on basic education, the allocation of artificial intelligence hardware facilities in primary schools in China has become increasingly perfect. At the same time, primary school Chinese teaching is the starting point for students to build a Chinese knowledge framework, which more urgently needs the intervention of artificial intelligence to break the dullness of students' learning Chinese courses in traditional teaching, stimulate students' learning interest and improve teaching effects.

## 1. Overview

### 1.1 Research Purpose

In recent years, with the rapid development of science, technology, and the internet, artificial intelligence has been increasingly integrated into primary school classrooms, driving the advancement of education. In today's educational landscape, artificial intelligence has also become a crucial component of teaching strategies in primary school classrooms. Neglecting the significance of artificial intelligence would not only affect educational equity but also trigger various contradictions and issues, directly impacting the development of the education sector. The research on strategies for applying artificial intelligence in primary school classroom teaching is conducive to helping teachers optimize primary school classroom teaching through modern means, holding great significance for primary school classroom instruction. Therefore, this paper takes artificial intelligence as the starting point, analyzes the application of artificial intelligence in primary school classrooms from the perspectives of teachers, schools, and other stakeholders, and then proposes targeted solutions and methods to clarify the strategies for applying artificial intelligence in primary school classroom teaching.

### 1.2 Research Significance

#### 1.2.1 Theoretical Significance

Domestic and international academic circles have shown great enthusiasm in researching artificial intelligence, with a substantial number of published articles accumulating over time. This paper focuses on studying the strategies for applying artificial intelligence in primary school classroom teaching, thereby deepening the research on artificial intelligence teaching strategies based on previous studies. On one hand, basic education pays close attention to the problems in the practical application of educational technology equipment.

## 1.2.2 Practical Significance

Firstly, researching the strategies for applying artificial intelligence in primary school classroom teaching can accelerate the formulation of national policies related to artificial intelligence. Secondly, studying these strategies can provide certain reference for front-line teachers, offer insights to teachers and the education industry, and thus expedite the improvement of policies targeting artificial intelligence. Thirdly, it helps primary school Chinese teachers comprehensively understand the current status of primary school Chinese teaching, identify the achievements and problems in the practical application of educational technology equipment in primary school Chinese teaching, and encourage teachers to consciously and proactively make changes.

## 2. Current Status of Artificial Intelligence Application in Primary School Classroom Teaching

### 2.1 Current Status of Artificial Intelligence Application in Primary School Classrooms

#### 2.1.1 Chinese Teachers' Mastery of Artificial Intelligence

According to the data, 12.16% of teachers are very proficient in using multimedia tools, and 25.68% are relatively proficient. These two sets of data indicate that a large proportion of teachers can master the methods of using multimedia quite skillfully. At the same time, 60.81% of teachers reported being not very proficient, and even 1.35% said they could not use it at all. These figures show that while most teachers can grasp artificial intelligence to a certain extent, there are still some teachers who are either unskilled or completely unable to use artificial intelligence technologies.

#### 2.1.2 Application of Artificial Intelligence by Chinese Teachers in Primary School Classrooms

From the data, 33.78% of teachers stated that they use artificial intelligence almost every day, and 52.7% reported using it approximately three to four times a week. These two data points reveal that Chinese teachers use artificial intelligence in the classroom quite frequently, and most teachers are willing to integrate it into their teaching. However, 10.08% of teachers indicated using it only once or twice a week, suggesting that some teachers are not willing to use artificial intelligence but do so passively because others are using it. Additionally, 2.7% of teachers said they rarely use it, which reflects a reluctance to change their established teaching methods and accept new technologies. Meanwhile, questionnaire data shows that such teachers are over 50 years old, though not all teachers above 50 fall into this category.

As shown, 75.68% of teachers mainly use multimedia courseware in class, 13.51% primarily use electronic whiteboards, 5.41% rely on audio and video recordings, and another 5.41% mainly use projectors. These statistics indicate that 89.19% of teachers concentrate on using multimedia courseware and electronic whiteboards, while only 10.82% of teachers utilize audio-video recordings and projectors, reflecting a relatively limited diversity in the application of educational technologies.

### 2.2 Current Status of School Training and Management for Artificial Intelligence-related Facilities

#### 2.2.1 Current Status of School-organized Artificial Intelligence Training

As shown, only 17.57% of teachers reported improving their artificial intelligence capabilities through training conducted by school-invited technical professionals, while 20.07% mentioned receiving training organized by higher-level authorities. Notably, a significant 91.89% of teachers stated that they enhanced their skills through self-study, and 77.03% indicated that they improved their artificial intelligence abilities by communicating with colleagues. These data collectively reveal that the majority of teachers cannot obtain professional training through official channels such as schools or higher-level organizations for artificial intelligence improvement; instead, they primarily rely on self-directed learning and peer communication as their main methods of skill enhancement.

#### 2.2.2 Current Status of Artificial Intelligence Facilities Usage in Classrooms

Through on-site investigations into the actual usage of artificial intelligence by Chinese teachers in their classrooms, a total of six Chinese teachers (as shown in Figure 1) were observed. It was found that during their

lessons, these teachers primarily use multimedia projectors, wireless presenters, and microphones—all of which are uniformly installed and distributed by the school. Additionally, when using artificial intelligence equipment, some teachers were observed forcefully tapping the multimedia screens, and in cases where PPT presentations failed to display properly, they would repeatedly force-restart the devices, potentially causing unnecessary wear and tear on the equipment.



Figure 1. site Investigation of Artificial Intelligence Usage in Classrooms

### 2.2.3 Current Status of School Attention to Modern Educational Facilities

According to Figure, 8.11% of teachers encountered the problem of classrooms not being equipped with multimedia devices during their lessons, 55.41% of teachers reported that artificial intelligence equipment frequently malfunctions and cannot be used due to delayed repairs, and 60.81% stated that they cannot fully utilize artificial intelligence devices due to a lack of relevant educational and teaching resources. These statistics collectively reflect that schools have a relatively low level of attention to artificial intelligence facilities and their effective integration into teaching.

## 3. Problems in the Application of Artificial Intelligence in Primary School Classroom Teaching

### 3.1 Teacher-related Issues

#### 3.1.1 Differences in Chinese Teachers' Perceptions of Artificial Intelligence

Some Chinese teachers view artificial intelligence merely as an auxiliary teaching tool and an expandable educational resource, believing that not all teaching content requires its integration. In contrast, other teachers consider artificial intelligence an essential tool for the classroom. Teachers' perspectives on artificial intelligence vary based on their existing experience. Less experienced Chinese teachers often find it difficult to teach without multimedia courseware, perceiving it as an indispensable component of Chinese classes. This over-reliance is not conducive to teachers' professional development and can be counterproductive in fostering flexible teaching approaches.

#### 3.1.2 Chinese Teachers' Inadequate Familiarity with Artificial Intelligence Equipment Operation

During on-site classroom observations, instances were recorded where teachers, faced with sudden multimedia

equipment failures, were unable to continue teaching effectively, leading to classroom chaos and loss of control. This highlights teachers' excessive reliance on artificial intelligence. Additionally, statistical data indicates that 60.81% of teachers are not proficient in using artificial intelligence, and 1.35% are completely unable to operate it—both figures reflecting teachers' inability to skillfully handle artificial intelligence tools in the classroom setting.

### **3.1.3 Lack of Diversity in Chinese Teachers' Selection of Artificial Intelligence Equipment**

In classroom settings, teachers primarily utilize multimedia courseware, electronic whiteboards, school-provided microphones, and wireless presenters. However, other devices such as audio-video recorders and projectors are rarely employed, failing to fully leverage the unique advantages of different artificial intelligence facilities in Chinese teaching. This limited range of equipment usage reflects a lack of diversity in teachers' selection of artificial intelligence tools, which could otherwise enhance interactive and immersive learning experiences.

## **4. Analysis of Causes for Problems in Artificial Intelligence Application in Primary School Classroom Teaching**

### **4.1 School-level Factors**

#### **4.1.1 Inadequate Emphasis on Developing Chinese Teachers' AI Competence**

Schools have failed to provide targeted training to address the specific challenges Chinese teachers encounter when integrating artificial intelligence into their teaching practices. An analysis of the primary pathways through which Chinese teachers enhance their AI proficiency reveals that a mere 37.84% of teachers report having received formal training organized by their schools or higher-level educational authorities. In stark contrast, the majority of educators indicate that their AI skills are primarily self-acquired—through independent learning or informal knowledge-sharing with colleagues. Compounding this issue, only 25.68% of teachers claim to be highly proficient in the operation and application of AI tools, a statistic that underscores a critical gap in professional development.

Deprived of systematic, school-supported training, Chinese teachers are forced to seek technical assistance from non-specialized sources such as online tutorials or peer advice. These unregulated channels often disseminate incomplete or inaccurate information, leaving teachers ill-equipped to harness AI's full potential in the Chinese classroom. Consequently, teachers struggle with subpar courseware development, inefficient classroom organization, and an over-reliance on generic AI tools—ultimately leading to diminished classroom efficiency and failure to achieve intended teaching objectives.

#### **4.1.2 Lack of Regulations for the Protection and Maintenance of AI Facilities**

Schools have neglected to establish clear rules or guidelines governing the use, protection, and maintenance of AI and multimedia equipment. Neither school-wide policies nor class-specific rules address protocols for post-class equipment care, resulting in widespread misuse: Teachers frequently leave multimedia devices powered on after lessons, students are not assigned responsibility for monitoring equipment, and instances of students scribbling on interactive touchscreens post-class have become commonplace.

Furthermore, there is no dedicated personnel tasked with regular inspection and optimization of AI facilities. In underused spaces such as activity rooms, dust accumulates in equipment cooling vents, posing potential safety risks. When devices malfunction, repair processes are notoriously delayed—often taking up to a week to resolve. Even when class teachers proactively report issues, schools lack specialized technical staff, leading to reliance on external repair personnel. These technicians, unaccountable to school leadership, often perform hasty, substandard repairs, causing equipment to malfunction again shortly afterward and disrupting normal teaching operations.

#### **4.1.3 Neglecting AI's Role in Driving Chinese Curriculum Reform**

In practice, schools view multimedia and AI integration in Chinese classes as a perfunctory requirement—something that “must exist, must be used, and must appear useful”—rather than recognizing AI's transformative potential for long-term curriculum development. In the digital age, education is increasingly shaped

by technological innovation; each era's technologies redefine educational paradigms. Yet schools have failed to acknowledge how AI can revolutionize Chinese language teaching, remaining trapped in superficial applications: using images to "show students scenic beauty in poems," videos to "evoke emotions," or pictures to "spark interest during lesson introductions." This limited vision prevents AI from fulfilling its capacity to expose students to unseen worlds—whether the cultural landscapes of global civilizations or the frontiers of technological progress. Such exposure is critical to addressing students' common struggles in Chinese learning: impoverished language expression, closed-minded thinking, and information isolation. By failing to leverage AI as a window to broader knowledge, schools miss opportunities to inspire students to reflect on their futures and engage more deeply with the subject.

## **5.Strategies and Recommendations for AI Application in Primary School Teaching**

### **5.1 Teacher-level Strategies**

#### **5.1.1 Correctly Understanding AI and Transforming Teaching Strategies**

Teachers must first recognize AI as a supplementary teaching tool—one that is not only necessary but capable of bringing innovative surprises to the classroom. This foundational understanding should drive teaching innovation.

Implementing Open Teaching in Primary Chinese: Chinese teachers should use AI to break free from traditional closed classroom models, creating dynamic learning environments and fostering open teaching approaches. Key steps include:

Building respectful teacher-student relationships to eliminate students' fear of authority, encouraging equal dialogue and collaborative exploration.

Respecting students' subject status and nurturing their ability to solve problems independently.

Using AI to design open-ended classroom scenarios that enhance teacher competence and cultivate students' good learning habits.

For example, when teaching *The Peanut*, teachers can use AI to play videos depicting the peanut's growth cycle—from flowering to fruiting—and guide students to discuss and describe this process in their own words. Assignments might even involve hands-on activities like planting peanuts. Given primary students' natural curiosity, many have never closely observed a peanut's growth; AI's visual storytelling not only sparks interest but also achieves teaching objectives, creating a classroom atmosphere that is open, equal, and free.

Implementing Autonomous Learning in Primary Chinese: In the context of new curriculum reform, students' subject status has gained prominence, and AI plays a pivotal role in empowering autonomous learning. Teachers should leverage AI to stimulate students' initiative and lay foundations for their development:

Guiding students to use online platforms to search for knowledge independently, helping them organize information into structured systems.

Using modern educational tools to improve learning efficiency and foster self-awareness.

Take *Watching the Tide* as an example: Teachers can use AI to create micro-lectures on the Qiantang River tide and tidal phenomena, enabling students to learn at their own pace. Students then share their knowledge summaries with teachers, cultivating initiative, enhancing learning ability, and enriching experience in summarization—all of which support long-term academic growth.

#### **5.1.2 Diversifying Learning Paths to Expand Knowledge Reserves**

Chinese teachers must proactively seek opportunities to enhance their AI and teaching competence. This includes:

Consulting experienced colleagues for insights into AI application in Chinese classes, such as courseware design tips and practical precautions.

Utilizing teaching resources—images, videos, audio—to expand knowledge, and leveraging online platforms to learn from national exemplary teachers and outstanding lesson plans, transcending geographical and temporal

limitations.

For instance, before teaching *Evening River Song*, teachers can watch online demonstration lessons by renowned educators to study their teaching methods and lesson plans. In their free time, they might engage with national poetry programs (e.g., China Central Television's "Chinese Poetry Conference") to subtly enhance their classical poetry literacy, infusing lessons with passion for ancient verse. Researching poet Bai Juyi's life story through online resources and cultural programs allows for deeper contextual integration. Additionally, selecting high-quality recitation audio for students to listen to, evaluate, and imitate helps internalize emotions. Such efforts not only enrich course content but also improve teaching efficiency and student learning outcomes.

### 5.1.3 Enhancing Practical Skills to Improve Teaching Efficiency

Teachers must prioritize practical skills, reflecting on AI practice experience to identify and resolve issues in integrating AI with curriculum content. They should also refine courseware development and AI equipment operation skills to fully leverage AI's potential in stimulating interest and achieving seamless classroom integration.

Consider teaching *Animal Nursery Rhymes*: Teachers might first learn to create dynamic presentations, then rehearse before class to familiarize themselves with operation procedures, avoid errors, and allocate time effectively. By predicting teaching outcomes, they can use vivid dynamic demonstrations to illustrate lines like "Dragonflies spread wings mid-air; butterflies hide among flowers," helping students visualize scenes, build language description frameworks, and express themselves freely. Such engaging, interactive lessons boost student participation and expression interest, significantly enhancing teaching efficiency.

## 6. Conclusion

Artificial intelligence plays a pivotal role in primary school teaching. When applied scientifically and appropriately, it enhances learning efficiency, achieves multiplicative results, and enables the creative implementation of curriculum reform. Conversely, misuse or rejection of AI can harm Chinese classes: Teachers may neglect lesson preparation, rely on generic online lesson plans, and overload students with disjointed information, leading to poor learning outcomes.

For AI to thrive in primary classrooms, schools must prioritize its role—offering regular training and professional support to enhance teacher competence. Simultaneously, teachers must commit to continuous learning, refining their skills to harness AI's strengths. Through collaborative efforts between schools and educators, AI can drive transformative changes in primary Chinese teaching strategies, uphold new curriculum concepts, and realize open, autonomous teaching—ultimately fostering students' sustainable development.

In writing this thesis, I have endeavored to collect data, organize materials, and apply my academic knowledge to the best of my ability. However, due to limitations in academic competence and experience, the work undoubtedly contains flaws. I nonetheless hope this research offers valuable insights to educators and welcome constructive criticism from teachers to aid my future growth.

## References:

- [1] Han Y,Zhao Q.Optimization strategy of ideological and political education in colleges and universities based on modern information technology[J].Applied Mathematics and Nonlinear Sciences,2024,9(1).
- [2] Wang N.Application,Development,and Innovation of Educational Technology in the New Media Era[J].Education Reform and Development,2024,6(3).
- [3] Li Zongzhou,Nostalgia in Lu Xun's Writings:A Case Study of"Hometown",Zhongyuan Literature,2025,Issue 20,pp.5-7.
- [4] Li Zongzhou,The Enlightenment of Ye Shengtao's Thoughts on Reading Instruction for Prose Reading Teaching, Delta,2024,Issue 15,pp.116-118.