

A Study on Doubao AI-Assisted Chinese Oral Teaching Practice for Indonesian Primary School Students

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Abstract

In Chinese language teaching for Indonesian primary school students, learners have long faced insufficient opportunities for meaningful language input and oral output, limiting the development of communicative competence. This study investigates the use of Doubao AI as an auxiliary tool to support Chinese oral instruction. The participants were 30 students from a cross-grade combined class of Grades 5 and 6 at Dezhi School in Malang, Indonesia. The research employed classroom teaching practice using a pre-post comparative design, supported by classroom observation and systematic data recording. The findings indicate that integrating Doubao AI increased students' exposure to target language structures, encouraged more active classroom participation, and provided additional opportunities for oral interaction through contextualized learning tasks and immediate feedback. Students also demonstrated greater willingness to communicate in Chinese during classroom activities. However, several limitations were identified, including inaccuracies in speech recognition, translation errors, limited pronunciation correction, and insufficient personalized instructional support. These issues reduced the effectiveness of AI in certain learning situations and required continuous teacher intervention. Therefore, while Doubao AI shows considerable potential as a supplementary tool for enhancing Chinese oral teaching in overseas primary schools, it cannot replace teachers, who remain essential for providing pedagogical guidance, language correction, classroom management, and ensuring safe and effective AI-assisted learning.

Keywords: *doubao ai, chinese oral teaching, indonesian primary school students, ai-assisted teaching, dezhi school in malang*

Introduction

In the teaching of Chinese as a second language in Indonesia, primary school students have long been troubled by insufficient Chinese input and output, which is specifically manifested in the lack of authentic language communication contexts, insufficient opportunities for oral interaction, and scarce after-class practice channels. This problem

How to cite:

Chen, Y., Zhang, S., Zeng, X., Qin, L., & Aulia, I. A. (2026). A Study on Doubao AI-Assisted Chinese Oral Teaching Practice for Indonesian Primary School Students. *International Journal of Pedagogical Language, Literature, and Cultural Studies*. Nexus Publishing. ISSN: 3047-2202. Pages 105-114. doi: [10.63011/ip.v3i2.84](http://dx.doi.org/10.63011/ip.v3i2.84)

became more prominent during the COVID-19 pandemic due to the restriction of offline classes and the reduction of language interaction opportunities.

Meanwhile, with the continuous development of artificial intelligence technology, generative AI tools such as ChatGPT, Claude, Gemini, DeepSeek, Ernie Bot, Doubao, and Qianwen have emerged one after another, bringing possibilities for innovating traditional teaching. The application of artificial intelligence in language teaching has become a research hotspot.

In recent years, generative AI has been preliminarily applied in the teaching fields of second language listening, reading, writing, etc. Relevant studies have shown its certain potential in supporting language learning. However, existing researches mostly focus on senior high school and university stages, while studies targeting overseas primary school students, especially in Chinese oral teaching, are still relatively limited.

Doubao is a generative artificial intelligence product launched by ByteDance in China in 2023, with functions such as text generation, multi-turn dialogue and image generation. It has strong advantages in understanding and expressing Chinese context. Compared with general AI tools, it is more adaptable to Chinese teaching scenarios. Meanwhile, its simple interface, convenient operation, timely feedback and multi-function integration make it suitable for the practical teaching of Chinese oral classes in primary schools.

Based on the above background, this study conducts a teaching practice of Doubao AI-assisted Chinese oral classes in primary schools in Malang, Indonesia through classroom observation and comparative analysis. Although previous studies have explored AI-assisted language learning in secondary and higher education, empirical research on AI-assisted Chinese oral instruction for overseas primary school learners remains limited. Therefore, this study aims to investigate whether Doubao AI can improve the language input and output environment of Chinese oral classes for Indonesian primary school students. The findings are expected to provide practical evidence for integrating generative AI into primary Chinese language teaching while identifying its pedagogical strengths and limitations.

Method

Research Subjects

Thirty students from a cross-grade combined class of Grades 5 and 6 at Dezhi School in Malang, Indonesia are selected as the research subjects. The class is composed of students from different grades with certain differences in language proficiency, which can better reflect the real learning situation of overseas primary school Chinese classrooms. At the same time, the students are in the transition stage from basic to elementary Chinese learning, with certain oral Chinese expression abilities, which is suitable for carrying out research on oral output and classroom interaction observation. In addition, the class is a fixed teaching class, which is conducive to carrying out pre-post comparative teaching experiments on the same subjects, thus improving the comparability and controllability of the research.

Research Methods

This study adopts the classroom observation method of pre-post comparison in the same class, and conducts two thematic oral teaching experiments on the same group of students.

To ensure the comparability of the experiment, the two teaching sessions are consistent in teaching subjects, teaching duration, difficulty of classroom language points and teaching task structure, and are implemented by the same teacher in the same teaching environment to minimize the interference of irrelevant variables.

The first teaching session (control group) adopts the traditional oral teaching mode, with teacher explanation, model reading and choral repetition as the main teaching forms. Classroom language input mainly comes from teacher demonstration and textbook content, and students' main output methods are choral response and repetition.

The second teaching session (experimental group) introduces Doubao AI as an auxiliary tool on the basis of traditional teaching. Students use AI for oral expression query, dialogue generation and language practice in classroom situational tasks, and complete classroom tasks under the guidance of teachers.

The two teaching sessions revolve around different themes: the first is "Weekend Plans", focusing on the training of the "V + lai / qu" structure; the second is "Technology and Transportation", focusing on the training of serial verb sentences, so as to ensure that the difficulty of language points is roughly equivalent. (Table 1)

Table 1. Comparison of Teaching Implementation

Item	First Teaching (Control Group)	Second Teaching (Experimental Group)
Teaching Theme	Weekend Plans	Technology and Transportation
Introduction of AI	No	Yes (Doubao AI)
Source of Language Input	Teacher explanation	Teacher + AI-generated content
Classroom Interaction Mode	Teacher questioning – students' choral response	Student-AI dialogue + teacher guidance
Language Output Mode	Mainly choral repetition + teacher-student interaction	Mainly individual expression + AI-assisted generation
Core Language Point	"V + lai / qu" structure	Serial verb sentences

Through the above design, this study aims to analyze the changes in classroom language input structure and students' oral output behavior after the intervention of AI through classroom comparison under controlled variables, so as to provide empirical evidence for exploring the auxiliary role of AI in primary school Chinese oral teaching.

Core Tools and Application Methods

Core Tool:

Doubao AI is selected as the main auxiliary tool in this study. Doubao AI is a generative artificial intelligence tool with the capabilities of text generation, multi-turn dialogue and image generation, which can support the generation of classroom teaching content and interactive language practice. In this study, it is mainly used to enhance the diversity of classroom language input and support students' oral output practice.

Application Methods:

1. Assisting in generating teaching text content

Doubao AI is used to generate teaching scripts and classroom task contents around the themes of "Weekend Plans" and "Technology and Transportation", as well as the language points of "V + lai / qu" structure and serial verb sentences (see Figure 1 for details).

First Class: Weekend Plans – When Will He Come Back?

1. Core Sentence Patterns

A: When will he come back?

B: He will come back _. (today / tomorrow / afternoon / three o'clock)

2. "V + lai / qu" Structure

- Let's go over and sit down.
- I will go upstairs.
- Please bring your homework tomorrow.

Second Class: Technology and Transportation – Learning Chinese with AI

1. Serial Verb Sentences

- I ride a bike to school.
- He goes to the teahouse to drink tea.
- I use AI to learn Chinese

Figure 1. Classroom Oral Teaching Scripts

These are used to prepare input materials for classroom teaching, so as to expand the sources of classroom language input and enrich contextual design.

2. Assisting students in carrying out oral interactive practice

In the second teaching session, under the guidance of teachers, students try to use Doubao AI independently for oral expression query, dialogue generation and situational simulation practice. They output language through interaction with AI, complete classroom activities, and obtain immediate feedback support.

Data Collection

1. Classroom oral observation records: A "Classroom Oral Performance Observation Form" (Table 2)

Table 2. Classroom Oral Performance Observation Form

Item	Record Content
Class	Combined Class of Grades 5 & 6, Dezhi School
Class Duration	40 minutes

Total Number of Students	30
Classroom Theme	① Weekend Plans – When Will He Come Back? ② Technology and Transportation – Learning Chinese with AI
Teaching Mode	① Traditional teaching (without AI tools) ② AI-assisted teaching (students use AI to solve situational Chinese problems)
Core Language Points	① Three "V + lai / qu" structures: Let's go over and sit down.; I will go upstairs.; Please bring your homework tomorrow. ② Serial verb sentences: I ride a bike to school.; He goes to the teahouse to drink tea.; I use AI to learn Chinese.
Number of Activity Participants	① Traditional class: less than 10 students ② AI class: all 30 students
Number of Active Hand-raisers	① Traditional class: 15 students ② AI class: 28 students (raising hands to answer throughout the class)
Number of Chinese Users	① Traditional class: 3 students ② AI class: 19 students (adding Chinese to Indonesian/English expressions)
AI Usage Problem Records	□ Inaccurate Indonesian speech recognition □ AI translation errors □ Privacy safety reminders □ Overly difficult sentences □ Insufficient pronunciation correction □ Others
Overall Classroom Performance	① Traditional class: students are reserved, low participation, flat classroom atmosphere ② AI class: active atmosphere, full participation, strong willingness to express
Teacher Guidance Notes	1. Assist in handling AI recognition errors and translation deviations 2. Carry out education on privacy protection and safe AI use 3. Be responsible for pronunciation correction, grammar sorting, classroom management and learning support

is designed to record classroom data from three dimensions: language input environment, language output performance and classroom interaction environment. Among them, the language input environment mainly includes the source of input and the frequency of exposure to core language points, which is used to reflect the changes in the structure and frequency of classroom language input. Language output performance is recorded by the number of students willing to raise hands to answer and the number of valid Chinese sentences expressed, so as to reflect the participation degree and expression quality of students' oral output. The classroom interaction environment is observed by the number of participants in classroom activities and the overall interaction state of the classroom, which is used to describe the changes in students' classroom participation and interaction

atmosphere under different teaching conditions, so as to comprehensively reflect the impact of AI-assisted teaching on the classroom language input and output environment.

2. AI usage problem records: The problems of recognition, translation, operation and security encountered by students in the process of using AI are recorded throughout the process. It is used to analyze the actual supporting effect and existing limitations of AI in classroom application.

Results

Comparative Analysis of Overall Classroom Data

Table 3. Classroom Oral Performance Observation Form data analysis

Observation Dimension	Specific Item	First Class	Second Class
Language Environment	Input	Input Source	Mainly teacher explanation + AI practice
		Frequency of exposure to core language points	About 5 times per student About 11 times per student
Language Performance	Output	Number of students willing to raise hands to answer	15 students
		Number of valid Chinese sentences expressed	7 sentences
Classroom Environment	Interaction	Number of students participating in classroom activities	9 students
			30 students

From the data (Table 3), after the introduction of Doubao AI-assisted teaching, students have improved in three dimensions: language input, output and classroom interaction. This change shows that AI has improved the problems of lack of language context and insufficient oral interaction opportunities in the original classroom to a certain extent by providing contextualized language input and interactive support.

Discussion

In the first teaching session, classroom language input is mainly based on teacher explanation, model reading and choral repetition. Classroom interaction mainly occurs between teachers and students. Students' language output opportunities mainly depend on classroom questioning and response, and students lack independent expression opportunities among individuals. At the same time, due to the large number of students in the class, it is difficult for teachers to interact with all students one by one, resulting in limited actual oral output opportunities for students. In terms of classroom interaction performance, students are mainly passive recipients, relatively reserved, with weak willingness to take the initiative to express. The classroom as a whole presents the characteristics of "single input and

restricted output", which reflects some deficiencies in traditional classrooms to a certain extent.

In the second AI-assisted teaching session, the language input structure has changed. In addition to teachers providing language input, Doubao AI also provides supplementary input through dialogue scripts and situational tasks, enabling students to continuously contact target sentence patterns in the process of tasks, thus further increasing the repeated exposure opportunities of language input. By introducing the instant dialogue and task support functions of Doubao AI, the source of classroom language input has expanded from single teacher input to the combined form of "teacher explanation + AI-generated language materials". Students can conduct one-on-one dialogue with AI and group interactive practice in situational tasks, thus gaining more oral output opportunities. At the same time, AI supports repeated practice and instant feedback, providing a relatively low-pressure language practice environment for students, which alleviates students' anxiety about speaking Chinese to a certain extent, making them more willing to take the initiative to raise hands to answer and try to express in Chinese. Therefore, the overall classroom interaction frequency has increased, students' participation has been significantly enhanced, and the classroom atmosphere has shifted from passive acceptance to active participation.

In summary, the results of this study show that Doubao AI improves the classroom language input and output environment in Indonesian primary school Chinese oral classes mainly through two paths: "expanding the sources of language input" and "increasing language output opportunities", thus alleviating the problems of lack of context and insufficient oral interaction opportunities in the original teaching. However, it should be noted that this improvement is mainly reflected in auxiliary optimization at the classroom level, rather than a complete replacement of the traditional teaching structure.

Problems and Reflections

However, the following problems have emerged in the process of using AI for assisted teaching:

1. Insufficient accuracy of speech recognition

Due to the limited Chinese proficiency of Indonesian primary and secondary school students, some expressions still need to rely on Indonesian. However, when using Doubao AI for Indonesian speech input, there are recognition deviations in the system, and students need to switch to manual input, which increases operational steps and reduces the fluency of classroom activities. Therefore, teachers still need on-site guidance.

2. Insufficient accuracy of translation

When students use AI for translation, there are problems such as inaccurate translation, logical errors and semantic deviations, making it difficult to directly use AI answers as learning answers. Students often need to check through peer discussion or teacher explanation, indicating that teachers still play an important role in information screening and content verification.

3. AI usage safety and privacy issues

When primary school students use AI tools, there may be risks of privacy disclosure, such as casually sending real photos, disclosing personal information, and uploading original creative works. Cultivating primary school students' correct concepts of AI usage and safety awareness

is an important teaching link that AI cannot complete independently, and must be carried out by teachers through special education and timely reminders.

4. Limitations in personalized teaching support

In terms of pronunciation correction, Doubao AI's ability to recognize and provide feedback on individual students' phonetic errors is still relatively limited. For example, some students have initial consonant confusion (such as not distinguishing t/d), vowel errors or tone errors (such as mispronouncing "jīqī" as "jīqī"), which the AI system often cannot effectively identify and correct in a targeted manner. In terms of language output, the expressions generated by AI are sometimes too difficult in vocabulary and not fully suitable for the current Chinese level of primary school students. In sentence pattern training, students with weak foundations in serial verb sentences and "V + lai / qu" still need individual guidance from teachers.

Teaching Suggestions

Based on the classroom practice results and problem analysis of this study, the following targeted teaching suggestions are put forward to improve the application effect of AI in overseas primary school Chinese oral teaching:

1. Design authentic tasks around learning themes, focus on grammatical points, and control the difficulty of AI-generated content according to students' proficiency and teaching difficulty.
2. Encourage students to independently use AI to complete tasks such as repetition, dialogue and query, while providing necessary on-site technical support and language correction guidance.
3. Strengthen safety education in the process of AI use, guide students to use AI tools in a standardized manner, and protect personal privacy.
4. Clarify the auxiliary positioning of AI in the classroom, with teachers as the core. Highlight teachers' leading role in pronunciation correction, grammar explanation, classroom management and value guidance.
5. In future research and practice, further explore the application paths of AI in hierarchical task design, localized language adaptation and optimization of classroom interaction mechanisms, so as to improve the pertinence, adaptability and teaching effectiveness of AI-assisted teaching.

Conclusion

Through classroom teaching practice, this study finds that Doubao AI can make up for the lack of context in Chinese oral learning for Indonesian primary school students to a certain extent, and has a positive impact on students' classroom participation, oral output and Chinese usage. Under the condition of AI-assisted teaching, students gain more language practice opportunities in situational tasks, and their willingness to express orally and classroom participation are both improved.

Through classroom teaching practice, this study finds that Doubao AI can improve the language input and output environment of Chinese oral classes for Indonesian primary school students to a certain extent. In terms of language input, AI expands the sources of classroom language input and increases students' exposure to target language structures by providing contextualized dialogue scripts and classroom task materials. In terms of language output,

the situational tasks and instant feedback mechanism supported by AI increase students' oral expression opportunities to a certain extent, and improve classroom participation and Chinese usage frequency.

Furthermore, the AI-based contextual task-based learning method enables students to practice oral English in a relatively authentic language communication context, thus making up for the lack of language context in traditional classrooms to a certain extent and having a positive impact on students' interest in Chinese learning.

However, this study also shows that current AI tools still have obvious auxiliary characteristics in classroom application and cannot replace the core role of teachers in language teaching. There are still limitations in speech recognition accuracy, translation reliability, learning process monitoring and privacy safety guidance. Therefore, in actual teaching, AI is more suitable as a supplementary tool for classroom language input and output, while teachers play a leading role in teaching content screening, language correction, classroom regulation and safety guidance. Based on this, teachers' role in AI-assisted teaching has further expanded from "knowledge imparter" to "learning guide and content controller", which puts forward higher requirements for their teaching design ability, language judgment ability and technology integration ability.

Of course, this study still has deficiencies. Firstly, the sample of this study is limited to one cross-grade class in a single school, with a small sample scope, and the universality of the research results needs to be further verified. Secondly, the research cycle is short, only based on two classroom teaching sessions for comparative analysis, which cannot fully examine the sustained impact of AI in the long-term learning process. Future research can further expand the sample scope, extend the teaching cycle, and deeply explore the application effect of AI in Chinese teaching for primary school students.

In addition, this study relied primarily on classroom observation and descriptive comparison without employing quantitative statistical analysis. Future studies are encouraged to incorporate mixed-method approaches and larger samples to provide stronger empirical evidence regarding the effectiveness of AI-assisted Chinese oral instruction.

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