

Generative AI-Assisted POA-Based Instructional Design for Beginner-Level Spoken Chinese

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Abstract: In the context of the digital transformation of international Chinese language education, generative artificial intelligence (GenAI) offers potential support for a production-oriented approach (POA)-based instructional design for beginner-level spoken Chinese. In response to challenges such as insufficient alignment between motivating tasks and learners' proficiency levels, insufficiently targeted enabling scaffolds, and difficulties in organizing assessment and feedback, this study develops a GenAI-assisted POA instructional design model for beginner-level spoken Chinese. Using Lesson 5, "Wuhan Is a Good Place," from *New Era Spoken Chinese: Elementary (Volume I)* as a case, the study explores application pathways for GenAI in motivating task differentiation, enabling scaffold provision, and providing assessment feedback improvement. The analysis suggests that, under teacher guidance, GenAI can provide task suggestions, learning scaffolds, and feedback prompts for POA-based instructional design. GenAI-generated content should therefore be selected, revised, and adapted by teachers before being used in classroom instruction.

Keywords: Generative artificial intelligence; Production-oriented approach; Beginner-level spoken Chinese instruction; Instructional design

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1. Introduction

The production-oriented approach (POA) is a pedagogical theory in foreign language education that was established to solve the problem of separating language learning from language application. It stresses the importance of learning for use, and aims to enhance learners' ability to communicate in Chinese by means of language practice and communicative activities. The teaching procedure includes three phases: motivating, enabling and assessing. In the motivating phase, students are involved in initial production and are helped to recognize gaps in their current production; in the enabling phase, necessary linguistic and content support is provided according to the production objectives; and in the assessing phase, feedback is used to guide students in revising and improving their production ^[1]. For the instruction of beginner-level spoken Chinese, which focuses on the practice of oral expression and classroom interaction, POA provides a clear framework for organizing tasks, supporting the process, and giving assessment feedback. However, its application in the

classroom still encounters some practical difficulties, particularly in fitting the motivating activities to the proficiency levels of the students, matching the enabling scaffolds to the production problems of the students, and guaranteeing that the assessment feedback can support revision and subsequent production. These difficulties place high demands on teachers' instructional design, classroom orchestration, and assessment decision-making.

Generative artificial intelligence (GenAI), especially the applications based on large language models, can assist teachers in generating task suggestions, organizing learning resources, and providing feedback prompts according to the instructional information given by the teachers. These functions are consistent with the instructional design requirements of the motivating, enabling, and assessing phases of POA. Although recent studies have examined the integration of GenAI into POA instruction, its application to beginner-level spoken Chinese instructional design remains underexplored. Therefore, this study investigates the actual difficulties in applying POA to beginner-level spoken Chinese instruction, explores the supportive role of GenAI, constructs a GenAI-assisted POA instructional design model, and exemplifies the model with Lesson 5, "Wuhan Is a Good Place," from *New Era Spoken Chinese: Elementary (Volume I)*. The purpose of the study is to offer a practical guide for designing spoken Chinese teaching in the field of international Chinese language education during the process of digital transformation.

2. Rationale for GenAI-assisted POA instruction in beginner-level spoken Chinese

2.1. Practical challenges in applying POA to beginner-level spoken Chinese instruction

The teaching procedure of POA is based on three phases: motivating, enabling, and assessing. Previous research has investigated the design principles and execution requirements of these phases, which offer theoretical support for the application of POA to beginner-level spoken Chinese instruction. However, when considering the oral development characteristics of beginner learners and the realities of the classroom, the implementation of POA in beginner-level spoken Chinese classes still encounters several practical difficulties. Therefore, this study analyses these difficulties through the three phases of motivating, enabling, and assessing.

First, differentiating motivating tasks is difficult to implement, and learners' production gaps may not be fully revealed. The motivating phase of POA aims to involve the learners in the initial production so that they can discover the gaps in their current production and find out their further learning needs ^[2]. In practice, teachers need to adjust the difficulty of the tasks according to learners' proficiency levels and offer differentiated production tasks ^[1]. However, the learners in the same class differ in their language proficiency and expressiveness, which makes it hard for the teachers to meet their different production needs within the limited class time. If the requirements of a motivating task are too strict, the less proficient learners may fail to start their oral production, while the more proficient ones might remain at the level of simple, surface-level expression if the requirements are too low. Moreover, the organization of classroom interaction may also influence the effectiveness of the motivating phase. All these factors may impair its intended function of assisting the learners to recognize the gaps in their current production.

Second, scaffolding in the enabling phase may not be sufficiently targeted, and teachers may struggle to respond dynamically to emergent classroom needs. As a crucial component of the POA, the enabling phase requires teachers to provide scaffolding in content, language, and structure according to the production objectives ^[3,4]. However, in large classes, the production difficulties of each student are different, which makes it hard for teachers to offer appropriate scaffolding. Therefore, relatively uniform enabling activities

may not fit the actual production difficulties of students, thus decreasing the effectiveness of targeted support in the enabling phase. Besides, spoken Chinese classes involve immediate and frequent interaction. When students are involved in oral production and interaction with their classmates, they may encounter problems such as a lack of vocabulary, difficulty in using sentence structures, and difficulty responding to their classmates' follow-up questions. These problems often occur during class, vary among students, and may go beyond the scope of the pre-planned enabling activities. Consequently, the lack of timely and targeted scaffolding may influence the effectiveness of the enabling phase in helping students with their production.

Third, determining the assessment focus is time-consuming, and peer-assessment feedback is often of limited quality. In the assessing phase of the POA, assessment is used to help learners revise and improve their production, thus achieving assessment for learning^[5,6]. However, in actual teaching, the effective implementation of assessment is still difficult. Teachers need to choose some typical examples from learners' production, identify common problems, and determine the assessment focus, which requires a lot of time. Moreover, beginner-level learners often have limited language proficiency and assessment experience. Without a definite assessment focus and adequate linguistic support, peer assessment may only give general comments instead of providing specific and effective revision suggestions. These problems may hinder the realization of the principle of assessment for learning in beginner-level spoken Chinese instruction.

Overall, the major problems in applying the POA to beginner-level spoken Chinese instruction are related to classroom practice, especially in matching motivating activities with learners' proficiency levels, adapting enabling resources to learners' production difficulties, and organizing assessment and feedback. Since the use of generative artificial intelligence is becoming more common in language teaching, it is important to investigate its assistance in supporting teacher-guided POA-based instructional design.

2.2. The potential of GenAI in supporting POA-based instructional design for beginner-level spoken Chinese

GenAI, especially applications based on large language models, is being widely applied in language teaching, and some recent studies are investigating its potential to support POA-based instructional design. Kohnke *et al.* pointed out that generative AI tools like ChatGPT can help in language teaching by providing semantic explanation, error correction, example sentence generation, dialogue generation, difficulty adaptation, and immediate feedback^[7]. For the particular context of POA instructional design, Li suggested that ChatGPT can assist teachers in planning production scenarios, establishing production objectives, designing enabling activities, and identifying assessment focuses^[8]. Overall, these studies indicate that the functional advantages of GenAI are compatible with the requirements of POA-based instructional design in task planning, enabling resource use, and assessment feedback, and that GenAI can be used as an auxiliary resource under teacher guidance.

Research on spoken Chinese instruction in international Chinese language education and on specific phases of the POA has also revealed the role of GenAI in language teaching. For instance, Li applied ChatGPT during the motivating phase of a POA-based spoken Chinese course for international students to generate question prompts, stimulate ideas, and collect relevant materials, which helped learners engage in initial production^[9]. The teaching practice indicates that ChatGPT could expand learners' ideas for expression, offer content support for their initial production, and assist teachers in identifying gaps in learners' linguistic form and content-related ideas. Qiu's study on the POA enabling phase shows that the incorporation of GenAI into a collaborative relationship among teachers, AI, and students can provide various sources of classroom knowledge, support emergent classroom interaction, and give personalized help to learners'

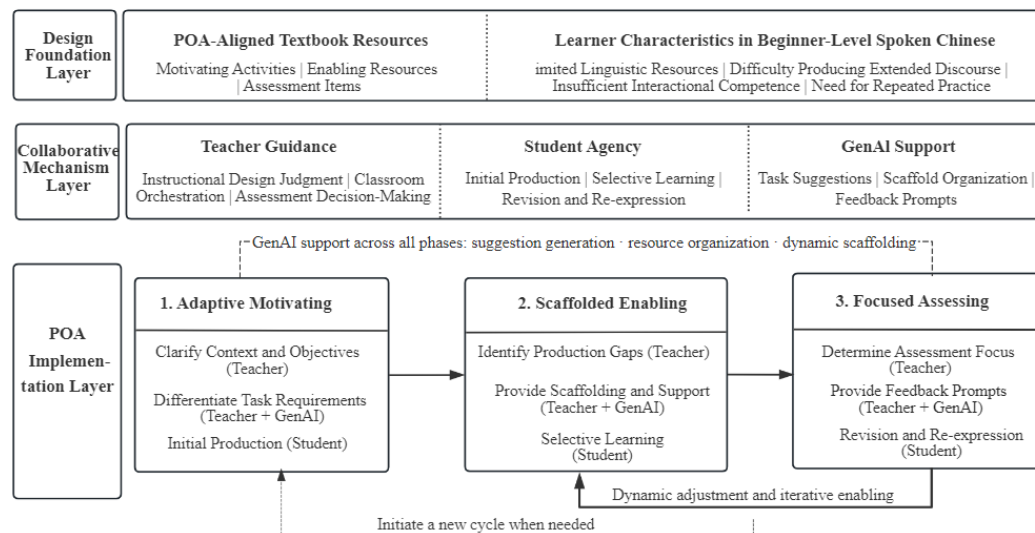
different production needs, thus improving the targeted and progressive nature of enabling activities ^[10]. Sun and Qi's study on teacher–student collaborative assessment further demonstrates that GenAI can decrease teachers' workload in identifying representative problems and arranging assessment feedback through problem classification, assessment focus identification, and feedback-prompt generation ^[11]. At the same time, it can provide follow-up assistance for learners in understanding problems and revising their production. In summary, these studies indicate that GenAI can support task-based motivating, scaffolded enabling, and assessment feedback in POA instruction, providing a theoretical foundation and design implications for this research on GenAI-assisted POA instructional design for beginner-level spoken Chinese.

3. Practical pathways for GenAI-assisted POA instructional design in beginner-level spoken Chinese

3.1. A GenAI-assisted POA instructional design model for beginner-level spoken Chinese

Based on the previous investigation of the practical difficulties in using POA for beginner-level spoken Chinese instruction and the possibility of GenAI to assist in POA-based instructional design, this research establishes a GenAI-assisted POA instructional design model for beginner-level spoken Chinese (see **Figure 1**). The model shows how teachers can appropriately incorporate GenAI into the POA teaching process. It is based on POA-aligned textbook resources and the learner characteristics of beginner-level spoken Chinese classes. Teachers should make use of the textbook's motivating activities, enabling resources, and assessment components to keep the instructional design consistent with the existing teaching content. Besides, beginner-level learners usually lack sufficient linguistic resources, have difficulty producing extended discourse, have limited interactional skills, and require more practice opportunities. Therefore, the instructional design must consider the suitability of motivating tasks, scaffolding provision, and feedback methods.

A GenAI-Assisted POA Instructional Design Model for Beginner-Level Spoken Chinese



Note. Solid arrows indicate the main flow of teaching activities; dashed arrows indicate feedback pathways; dashed lines indicate GenAI support. In this model, "Teacher," "Student," and "GenAI" refer respectively to teacher guidance, student agency, and GenAI support.

Figure 1. A GenAI-assisted POA instructional design model for beginner-level spoken Chinese

In regard to its collaborative mechanism, the model highlights the important roles played by teacher guidance, student agency, and GenAI support. Teachers are in charge of instructional design, classroom orchestration, and assessment decision-making; students carry out their learning through initial production, selective learning, revision, and re-expression; and GenAI assists teachers by suggesting tasks, providing scaffolding, and generating feedback prompts. During the POA teaching process, this mechanism is implemented in three interrelated phases: adaptive motivating, scaffolded enabling, and focused assessing. The motivating phase clarifies the communicative context and production objectives and proposes different task requirements according to learners' proficiency levels. The enabling phase identifies production gaps, offers targeted scaffolding, and directs students in selective learning. The assessing phase determines the assessment focus and gives concrete feedback to promote revision and re-expression. Instead of being carried out in a strict sequential order, these three phases can be adjusted flexibly according to learners' production performance, and supplementary enabling activities are provided when necessary, or a new motivating cycle is started.

3.2. A unit design case based on the model: “Wuhan Is a Good Place”

Based on the model given before, this research takes Lesson 5, “Wuhan Is a Good Place,” from *New Era Spoken Chinese: Elementary (Volume I)* as an example to demonstrate the application of the model in unit-level instructional design. The lesson mainly focuses on the theme of “introducing a place” and employs “You Describe, I Guess” as a motivating activity, providing enabling resources such as vocabulary, texts, sentence patterns, and paragraph-level expression exercises. According to the production task and related prompts in the textbook, the production objective of this lesson is to enable students to introduce a city which they know well or like, describe it in terms of weather, landmarks, food, and personal impressions, and express some simple personal views. Following this objective, the study keeps the original activity structure of the textbook and uses GenAI to modify and supplement the motivating activity, enabling scaffolds, and providing assessment feedback.

3.2.1. Motivating phase: GenAI-assisted task differentiation and alignment with learner characteristics

In the motivating phase, the teacher directs students to participate in initial production and helps them recognize gaps in their current production, so as to develop further learning needs. Before applying POA-aligned textbooks, the teacher should first study the motivating activities presented in the textbook and define the communicative contexts and production objectives. In Lesson 5, “Wuhan Is a Good Place,” the activity “You Describe, I Guess” is used, in which students describe a city that they know well or like, while their classmates try to guess the city according to the description given. This activity provides a definite communicative task for students' initial production about “introducing a city.”

In designing motivating tasks, teachers can apply GenAI to differentiate existing textbook activities so that one task can be suitable for different levels of oral production. Although the textbook activity gives a general structure of the task, teachers still need to adapt it to the class according to learners' characteristics. Beginner-level learners usually have limited linguistic resources, have difficulty producing extended discourse, and lack interactional ability. Differences in the proficiency levels within the same class might also influence students' engagement with the motivating task and the extent of their involvement. If the

same task requirements are given to students at different levels, less proficient learners may not be able to participate actively, while more proficient learners may not have enough chances for extended expression. Therefore, teachers can input the production objectives of the lesson, students' proficiency levels, and activity requirements into GenAI to get suggestions about task differentiation, dimensions of oral expression, and activity procedures, and then choose and modify these suggestions according to the lesson plan and students' actual conditions.

For the task of describing a city, less proficient learners may provide two or three basic clues about weather, attractions, and food; learners at an intermediate level can describe the city's features in a more detailed and coherent way; while more proficient learners may express their own opinions, state the reasons for recommending the city, or give further explanations in response to questions raised by their classmates. The teacher can organize the activity in the order of "description–guessing–follow-up questioning–elaboration" to prevent students from limiting their participation to a single description and to make them provide more details through peer interaction. This modification helps less proficient learners begin oral production, keeps the level of difficulty appropriate for more proficient learners, and makes students' gaps in vocabulary use, sentence structure, content organization, and interactional responses visible during initial production, which provides a basis for the subsequent enabling phase.

3.2.2. Enabling phase: GenAI-assisted targeted scaffolding and dynamic response

The enabling phase is an important step in the POA teaching process, following the motivating phase and assisting learners in preparing for subsequent production. Teachers need to offer targeted support in terms of content, language, and structure according to the production objectives, thus enabling learners to improve their production gradually. Lesson 5 supplies enabling resources for "introducing a city," such as vocabulary, texts, exercises, and production prompts. With these resources, GenAI can help teachers use textbook resources more effectively. It can also help identify learners' actual production problems. In addition, it can support timely responses to emergent classroom needs.

To provide targeted scaffolding, teachers need to select textbook resources according to students' main production problems. GenAI can support this process by helping teachers analyze these problems and suggest suitable scaffolds for selective learning. Although students in the same class may complete the same production task, their oral production problems often vary. Some students lack sufficient content, some rely on a few simple sentence patterns, and others have difficulty organizing their ideas clearly. The textbook provides a range of enabling resources, but using the same resources for all learners may not fully address these differences. To solve this problem, teachers can use GenAI to examine classroom observation records, typical samples of students' oral production, or partial oral transcripts, so as to identify the common gaps in content, language, structure, and interaction. On this basis, teachers can modify the content prompts, sentence frames, and paragraph-level expression activities in the textbook into learning scaffolds that suit different expressive needs. For instance, students who lack enough content for expression can refer to prompts about weather, landmarks, food, and personal impressions; those who use only a few types of sentence patterns can adopt frames such as "This city is...", "There is/are... here," and "I like... because..."; those whose expressions are not well organized can arrange their content according to the order of "city features–famous places–food–personal impressions–reasons for recommending the city"; and those having difficulty in answering peers' follow-up questions can practice concise follow-up and response patterns. Students can then

choose suitable scaffolds for practice according to their own difficulties. This method enhances the alignment between textbook resources and students' actual production difficulties, making the activities better reflect the requirements of targeted enabling and selective learning.

In addition to providing targeted scaffolding according to learners' existing production gaps, the enabling phase must deal with emergent problems arising during oral interaction. Although Lesson 5 mentions "Wuhan" and offers some basic scaffolds for introducing a city, students might need to express place names, local foods, tourist attractions, and personal impressions when introducing a city they know well or like, which are not clearly presented in the textbook. They may also have trouble answering follow-up questions raised by their classmates. Therefore, teachers can make use of GenAI to supplement textbook scaffolds by generating basic vocabulary prompts, alternative sentence patterns, and interactional response expressions in response to students' immediate difficulties. For instance, for the question "Why do you like this city?", GenAI can propose "I like this city because..." After choosing and modifying the generated content for classroom use, teachers can use it to meet students' current expressive needs. Recurrent but unresolved classroom problems can also be transformed into supplementary materials or further enabling resources with the assistance of GenAI. Thus, GenAI can assist in supplementing textbook scaffolds under teacher guidance and improve the responsiveness of the enabling phase to emergent classroom problems.

3.2.3. Assessing phase: GenAI-assisted assessment focus identification and feedback optimization

The assessing phase is an important part of the POA instructional cycle. Its main purpose is to use assessment to help learners identify problems, revise their current production, and improve their subsequent production, thus achieving assessment for learning. In the assessment arrangement of this lesson, GenAI assists teachers in two main aspects. Firstly, it enables teachers to identify typical problems in students' oral production and provides information for determining the assessment focus. Secondly, it assists teachers in converting the assessment focus into feedback prompts that are understandable and usable by beginner-level learners, so as to increase the effectiveness of assessment feedback.

In the assessing phase, GenAI can help teachers identify typical problems in students' oral production and tell them what aspects should be emphasized in the assessment. When students finish tasks like "introducing a city," teachers can use GenAI to identify common, representative, and revisable issues in their oral production, for instance, insufficient explanation of reasons, unclear sequencing, and inadequate interactional responses. Nevertheless, the results generated by GenAI should be considered only as preliminary summaries and not as the main focus of classroom assessment. Teachers must choose the assessment focus according to the production objectives of the lesson, students' actual proficiency levels, and the typicality, teachability, and revisability of the identified issues. For example, if most students can mention a city's landmarks and food but cannot explain their personal opinions or reasons for recommending it, teachers may set the assessment focus as explaining why they like or recommend the city. Teachers can then select representative samples to illustrate this focus. They may guide students to compare the original and revised expressions and turn the focus into concrete feedback prompts, such as "You have introduced..., and you could also add why you like this place" and "I recommend this city because..." These prompts help students identify what to revise and how to complete re-expression. In this way, GenAI can support teachers in selecting representative problems and clarifying the assessment focus. It also helps make assessment more focused and reduces overly broad or unfocused feedback, thereby supporting students' revision and

subsequent production.

GenAI can also be used to organize peer assessment and revision feedback. This support is especially useful for beginner-level learners, who often have limited language proficiency and little assessment experience. Without a clear assessment focus and language support, their peer feedback may remain vague, such as “You spoke well” or “It was not very complete.” Teachers can therefore provide GenAI with the assessment focus and generate peer-assessment prompts for learners. These prompts reduce students’ language burden and guide them toward more focused comments. For example, if the assessment focus is explaining why a student likes a city, possible prompts may include “I heard you talk about...,” “I would like to know why you like this city,” and “You could add one sentence: I like this place because...” Such prompts direct students’ attention to specific content points. After assessment, students can revise their original expressions and complete another round of re-expression based on teacher feedback, peer suggestions, and self-assessment. In this way, GenAI helps teachers turn the assessment focus into usable peer-assessment prompts. It also helps peer assessment move from general judgment to more specific feedback, thereby supporting students’ revision and re-expression.

4. Conclusion

According to the above analysis, this research indicates that, under teacher guidance, GenAI can offer assistance during the entire process of POA teaching. In the motivating phase, it can assist the teacher in refining task requirements according to learners’ characteristics and improving the design of classroom interaction. In the enabling phase, it can help the teacher analyze students’ production problems, draw on and supplement textbook resources, and provide more targeted scaffolding. In the assessing phase, it can assist the teacher in identifying typical problems and transform the assessment focus into peer-assessment prompts and revision suggestions that are accessible to beginner-level learners. Therefore, GenAI can provide certain support for task alignment, scaffolding provision, and feedback improvement in POA instructional design for beginner-level spoken Chinese.

It is important to keep in mind that GenAI-assisted POA instructional design should still remain grounded in teachers’ professional judgment. GenAI-generated content should not be directly used as classroom content; instead, teachers should select, revise, and adapt it according to instructional objectives, textbook resources, learners’ proficiency levels, and classroom conditions. This study mainly concentrates on instructional design and has not yet thoroughly verified the effects of GenAI-assisted POA instruction through classroom implementation. Further research may employ classroom observations, students’ oral production, and learner feedback to investigate its practical effectiveness and scope of applicability in beginner-level spoken Chinese instruction.

Disclosure statement

The author declares no conflict of interest.

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