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Instructional Innovation in Vocational Undergraduate College English Speaking Driven by Portable Large Language Models in the Context of the Hainan Free Trade Port

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Abstract: The Hainan Free Trade Port has created new demands for vocational undergraduate students' English speaking competence, particularly in workplace communication, intercultural interaction, and service-oriented tasks. Yet traditional College English speaking instruction remains constrained by limited authentic contexts, insufficient personalized feedback, and weak continuity between in-class and out-of-class learning. To address these challenges, this paper explores the pedagogical potential of portable large language models in vocational undergraduate English speaking instruction. It proposes an innovative model centered on job-based scenarios, task-chain learning, human-AI collaborative feedback, and data-informed assessment. The paper argues that portable large language models can enhance practice frequency, feedback efficiency, and occupational relevance, thereby supporting the transformation of College English speaking instruction from knowledge delivery to competence-oriented, scenario-based learning.

1. Introduction

The *Master Plan for the Construction of the Hainan Free Trade Port* clearly states that Hainan should be developed into a distinctive symbol of China's opening-up in the new era, while building an open modern industrial system centered on tourism, modern services, and high-tech industries [1]. As the Hainan Free Trade Port advances the construction of an international tourism and consumption center, the development of cross-border trade in services, and institutional arrangements associated with customs closure operations, foreign language service competence, international communication competence, and intercultural expressive competence are increasingly becoming fundamental capacities for local industrial talents [1]. Relevant Hainan policies have repeatedly stressed the need to improve foreign language services in tourism and public service sectors and to cultivate foreign language talents capable of serving the Free Trade Port [2]. This means that College English courses in vocational undergraduate institutions can no longer remain at the level of general language knowledge training; instead, they should place greater emphasis on four categories of core

competence: workplace speaking, service communication, intercultural response, and task-based expression.

From the perspective of educational policy, the newly revised *Vocational Education Law of the People's Republic of China* further establishes vocational education as equally important as general education and highlights the cultivation of high-quality technical and skilled talents [3]. The *Outline for Building a Leading Country in Education (2024-2035)* and the *Opinions on Accelerating the Advancement of Educational Digitalization* place educational digitalization, AI-enabled education, and transformation of talent cultivation models in a more prominent position [4-5]. These policies provide support for reforming vocational undergraduate English courses and imply that speaking instruction needs to shift from "being able to speak English" to "being able to use English to complete occupational tasks."

However, current College English speaking instruction in vocational undergraduate institutions still presents several typical problems. First, teaching content is often disconnected from authentic workplace scenarios. Classroom topics tend to focus on everyday communication rather than high-frequency occupational situations in Hainan such as tourism reception, exhibition services, cross-border e-commerce, healthcare and wellness services, and international communication. Second, under limited class hours, teachers find it difficult to provide every student with high-density, personalized, and trackable speaking feedback. Third, students commonly experience speaking anxiety, insufficient practice opportunities, and difficulty sustaining after-class autonomous practice. Fourth, assessment methods still rely excessively on result-oriented testing, lacking comprehensive evaluation of process performance, task completion quality, and occupational communication literacy. These problems make it clear that traditional classroom models alone cannot accomplish the upgrading of vocational undergraduate English speaking instruction.

Over the past two years, research on the use of large language models in education has grown rapidly. Systematic reviews show that one of the main applications of LLMs in education is intelligent tutoring, and that they can positively affect learning performance, engagement, and accessibility, while also bringing risks such as overdependence, privacy concerns, fairness issues, and technical unreliability [6]. In the field of English-speaking instruction, existing studies suggest that training based on Deepseek, Doubao AI, and similar systems can help improve university students' English communication skills, reduce speaking anxiety, and increase the immediacy and personalization of feedback [7-9]. At the same time, studies on on-device or edge-deployed language models indicate that deploying language models on mobile terminals or edge devices can bring lower latency, local data processing, and improved user experience [10]. For vocational undergraduate speaking instruction, this means that "portable large language models" may become a key medium connecting classroom learning, practical training, workplace tasks, and everyday life contexts.

Accordingly, this paper seeks to answer three questions. First, what competence objectives need to be restructured for vocational undergraduate College English speaking instruction in the context of the Hainan Free Trade Port? Second, why are portable large language models particularly suitable for reforming vocational undergraduate speaking instruction? Third, how can an instructional model be constructed that combines local industrial relevance, the orientation of vocational education, and practical pedagogical operability?

2. Theoretical Foundations and Practical Logic

2.1 New Requirements of the Hainan Free Trade Port for English Speaking Competence in Vocational Undergraduate Education

The Hainan Free Trade Port emphasizes high-level opening-up, the construction of an international tourism and consumption center, and the upgrading of modern service industries. These goals

collectively point to higher-quality international communication scenarios [1-2]. In particular, front-line workers in tourism, exhibitions, hotels, healthcare and wellness, cross-border trade, and public service sectors are required not only to "understand and speak English," but also to complete complex language tasks such as service explanation, procedure description, complaint handling, cultural introduction, product presentation, and emergency communication [2]. Therefore, the objective of College English speaking instruction in vocational undergraduate institutions should shift from general communicative English to "occupational task-based speaking competence." This competence includes at least five dimensions: the basic accuracy of pronunciation and intonation, the professionalism of workplace expression, the immediacy of interactive response, the appropriateness of intercultural communication, and the integrated performance of service attitude and professional etiquette.

Moreover, the language service demand of the Hainan Free Trade Port is not confined to traditional tourism English, but is increasingly extending to international communication, legal services, medical services, and digital trade [11]. This implies that College English speaking courses in vocational undergraduate institutions cannot revolve solely around textbooks; instead, teaching scenarios should be restructured around local industrial chains, job chains, and service chains, thereby achieving dynamic linkage among curriculum content, occupational standards, and regional needs.

2.2 Educational Advantages of Portable Large Language Models

UNESCO's guidance on generative AI in education stresses that generative AI can be used in curriculum design, teaching, learning, and research activities, but that human-centered principles, data privacy, and educational ethics must be upheld [12]. In vocational undergraduate English-speaking instruction, the value of portable large language models is mainly reflected in the following aspects.

First, **immediate interactivity**. The development of speaking competence heavily depends on high-frequency cycles of input and output. Device-side or mobile-integrated large language models enable students to practice conversation anytime and anywhere, making it possible to conduct micro-practice during fragmented periods such as waiting, commuting, or breaks between practical sessions. This can substantially increase the total amount of spoken output.

Second, **personalized feedback**. Compared with uniform classroom comments, large language models can generate tiered feedback according to students' pronunciation, diction, grammar, logic, and pragmatic performance, helping them identify their weaknesses.

Third, **scenario generation**. Models can quickly generate various occupational scenarios such as tourism reception, product promotion, intercultural explanation, job interviews, and complaint handling, thereby improving the authenticity and transferability of training.

Fourth, **portability and low threshold**. End-side or edge deployment solutions feature lower latency, local data processing, and stronger mobility, making them especially suitable for the large-scale, distributed, and continuous use required in vocational institutions [10].

Fifth, **trackability of learning data**. Students' practice frequency, error types, task completion quality, and progress trajectories can be recorded and used in formative assessment, thereby improving the precision of instructional diagnosis.

2.3 Boundaries and Risks of Technology Application

It must also be recognized that the role of large language models in education is not unconditionally positive. Existing systematic reviews note that the application of LLMs is accompanied by risks such as hallucinations, unstable evaluation, privacy concerns, learner overdependence, and fairness issues [6]. In English speaking instruction, if students treat model outputs as the sole standard, their

independent thinking and real communicative ability may be weakened. If teachers rely excessively on AI scoring, dimensions such as intercultural appropriateness, emotional expression, and professional etiquette—which are difficult to quantify—may be neglected. Therefore, portable large language models should be positioned as **auxiliary, companion, and enhancement tools**, rather than **substitutive, decisive, or central authorities**. Their use should follow these principles: teachers lead the objectives while AI supports practice; teachers control evaluation while AI provides evidence; teachers take responsibility for values guidance while AI handles repetitive feedback.

3. Construction of an Instructional Model Driven by Portable Large Language Models for Vocational Undergraduate College English Speaking Instruction

Drawing on the type orientation of vocational education, the scenario needs of the Hainan Free Trade Port, and the capability characteristics of large language models, this paper proposes a teaching model summarized as "one core, two lines, four links, and five dimensions."

3.1 One Core: Occupational Speaking Competence as the Central Focus

"Occupational speaking competence" is not a single language ability, but a comprehensive competence through which students use English to complete tasks in specific occupational scenarios. It includes at least five dimensions:

1) **Language foundation**: pronunciation, vocabulary, grammar, and fluency;

2) **Task completion**: the ability to complete introductions, explanations, question-answering, negotiation, and problem-solving accurately;

3) **Professional norms**: polite expression, service procedures, and professional identity awareness;

4) **Intercultural dimension**: understanding differences between Chinese and foreign cultures, avoiding pragmatic failures, and conducting cultural explanations;

5) **Reflective development**: the ability to revise and transfer learning based on feedback.

This core focus means that speaking instruction no longer centers on "memorizing sentence patterns," but rather on "whether one can communicate effectively in workplace scenarios."

3.2 Two Lines: Coordinated Advancement of Classroom Teaching and Mobile Practice

The **classroom teaching line** mainly undertakes objective introduction, task demonstration, collaborative rehearsal, teacher commentary, and values guidance. Teachers design tasks according to professional categories and typical Free Trade Port scenarios, such as hotel front-desk reception, scenic site interpretation in English, cross-border e-commerce product livestreaming, exhibition consultation, healthcare service communication, and reception for international campus exchanges. In class, teachers do not allow AI to replace interaction directly; instead, they adopt a sequence of "task assignment-role performance-human-AI comparison-teacher guidance," helping students understand the standards of high-quality spoken output.

The **mobile practice line**, by contrast, relies on portable large language models to enable students to engage in continuous micro-practice after class. Through mobile phones, tablets, or school terminals, students can interact with models to complete shadowing, situational Q&A, workplace explanation, cultural introduction, emergency response, and other forms of training. The model immediately returns feedback on pronunciation, vocabulary, grammar, logic, and pragmatics, and generates personalized practice suggestions. In this way, the classroom is no longer the only place for speaking practice; instead, it becomes the center for method acquisition and task upgrading, while after-class practice becomes the main arena for competence consolidation and transfer.

3.3 Four Links: Scenario Generation, Task Implementation, Feedback Optimization, and Transfer Application

3.3.1 Scenario Generation

Teachers generate authentic occupational scenarios based on the key industries of the Hainan Free Trade Port and students' disciplinary backgrounds. For example, tourism management students may be assigned tasks such as "introducing Li ethnic culture in Hainan to foreign tourists" or "handling hotel check-in complaints"; nursing or wellness-related students may work on "explaining basic health management advice in English"; and cross-border e-commerce students may practice "promoting Hainan specialty products to overseas customers." Scenario generation emphasizes authenticity, progression, and local relevance.

3.3.2 Task Implementation

Students complete speaking tasks around the scenarios, including both monologic and interactive tasks. Monologic tasks include scenic introduction, product promotion, and procedure explanation; interactive tasks include inquiry response, problem-solving, and role negotiation. In implementation, multiple organizational forms may be used, such as "human first, AI second," "AI first, human second," or "human-AI combination."

3.3.3 Feedback Optimization

Portable large language models mainly provide three levels of feedback:

The first level is **language correction**, including pronunciation, grammar, collocation, and unnatural expression.

The second level is **communication optimization**, such as whether the tone is polite, the logic is clear, and the information is complete.

The third level is **occupational adaptation suggestions**, such as whether the performance conforms to service industry norms and demonstrates cultural sensitivity.

Teachers then re-screen, reinterpret, and elevate the AI feedback, helping students avoid mechanical correction and develop genuinely transferable expressive competence.

3.3.4 Transfer Application

Students transfer their training outcomes to more open scenarios, such as classroom presentations, school-enterprise joint practical training, service in international campus activities, English short-video promotion, and internship communication. The transfer stage is crucial because vocational undergraduate education must ultimately be grounded in real task performance.

3.4 Five Dimensions of Support: Objectives, Content, Methods, Assessment, and Ethics

The **objective dimension** emphasizes the integration of language competence, workplace competence, and professional literacy. The **content dimension** stresses the integration of textbook content with local industrial content. The **method dimension** highlights task-driven learning, situational simulation, and human-AI collaboration.

The **assessment dimension** stresses the combination of formative and summative evaluation. The **ethics dimension** highlights privacy protection, data security, responsible use, and a human-centered orientation. Among these, the ethics dimension is a new aspect that cannot be ignored once portable large language models enter the classroom. UNESCO has explicitly pointed out that when adopting

generative AI, educational institutions should pay particular attention to data privacy and ethical validation [12]. This is also one of the major values of portable solutions compared with systems that rely entirely on public cloud platforms.

4. Conclusion

The construction of the Hainan Free Trade Port is not only a project of economic and institutional opening-up, but also a project of reshaping talent cultivation models. For vocational undergraduate College English, what truly needs to be improved is not abstract "English scores," but students' ability to complete real occupational communication tasks in open environments. Portable large language models deserve attention not because they represent a passing technological trend, but because they respond precisely to several core difficulties in vocational undergraduate speaking instruction: insufficient practice opportunities, untimely feedback, lack of authentic scenarios, weak integration between in-class and out-of-class learning, and imprecise assessment.

Therefore, in the context of the Hainan Free Trade Port, vocational undergraduate College English speaking instruction should actively embrace new technologies represented by portable large language models. However, such adoption must be grounded in the logic of vocational education, local industrial needs, and the ethical bottom line of education. The ideal future is not one in which "teachers are replaced by AI," but one in which "teachers use AI to devote more time to higher-order guidance and transform students from passive learners into high-frequency practitioners." Only in this way can vocational undergraduate College English speaking instruction truly move from tool training to competence generation, and from course reform to transformation of the entire educational approach.

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