Scientific Research Publishing

Advances in Applied Sociology, 2025, 15(6), 419-428
https://www.scirp.org/journal/aasoci
ISSN Online: 2165-4336
ISSN Print: 2165-4328

Exploration of New Paths for Smart Classrooms to Empower the Enhancement of Higher Vocational Students' Willingness to Communicate in English

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How to cite this paper: Zhang, J. Y. (2025). Exploration of New Paths for Smart Classrooms to Empower the Enhancement of Higher Vocational Students' Willingness to Communicate in English. *Advances in Applied Sociology, 15,* 419-428.
https://doi.org/10.4236/aasoci.2025.156024

Received: May 15, 2025
Accepted: June 22, 2025
Published: June 25, 2025

Abstract

In the current context of the deep integration of globalization and informatization, English communication skills have become essential for higher vocational students to adapt to future career development. However, traditional teaching models have certain limitations in cultivating students' willingness to communicate in English. Smart classrooms, with their unique technological advantages and innovative teaching models, bring new opportunities for enhancing higher vocational students' willingness to communicate in English. This article deeply explores the paths by which smart classrooms can empower the enhancement of higher vocational students' willingness to communicate in English by analyzing their connotations and characteristics, aiming to provide theoretical support and practical references for the reform of English teaching in higher vocational education.

Keywords

Smart Classrooms, Higher Vocational Students, Willingness to Communicate in English, Artificial Intelligence, Teaching Model

1. Introduction

In the current era of rapid economic globalization and the vigorous development of information technology, English, as an international common language, plays an increasingly prominent role in international exchanges. The demand for talents with good English communication skills in society is constantly growing. Whether in business transactions of multinational enterprises, international aca-

demic exchanges, or daily communication in a multicultural context, English is indispensable. Higher vocational education, as a crucial link in cultivating applied talents, is of great significance in cultivating students' English communication skills. This not only relates to the personal career development of students but also affects China's competitiveness in the international talent market. However, the current English learning situation of higher vocational students is not optimistic. Although they have accumulated certain grammar and vocabulary knowledge during the learning process, in actual communication scenarios, they generally lack confidence and dare not speak English, resulting in a low willingness to communicate in English. This phenomenon seriously restricts their ability to integrate with the international community in future career fields and limits the space for their career development. For example, in some foreign-related internships or jobs, due to insufficient English communication skills, higher vocational students find it difficult to express their views accurately and cannot communicate and collaborate effectively with international colleagues, missing many valuable development opportunities.

The emergence of smart classrooms brings new hope for solving this problem. Smart classrooms rely on modern information technologies such as cloud computing, big data, and artificial intelligence to construct an intelligent, personalized, and interactive teaching environment. In such an environment, students can access a rich variety of learning resources and participate in diverse teaching activities, which helps to stimulate their interest in learning English, enhance their confidence in English learning, and thus increase their willingness to communicate in English. Therefore, deeply studying the new paths by which smart classrooms can empower the enhancement of higher vocational students' willingness to communicate in English has important practical significance and application value. Numerous research results provide theoretical support for the application of smart classrooms in English teaching in higher vocational education. Aldosari's (2024) experimental research found that artificial intelligence-assisted teaching can significantly enhance students' willingness to communicate in English, the achievement of personal best goals, and learning enjoyment. This research inspires us that in English teaching in higher vocational education, smart classrooms can leverage artificial intelligence technology to provide more targeted learning resources and feedback based on students' learning characteristics and needs, stimulating students' interest in learning and thus enhancing their willingness to communicate in English. The research by Abdulhussein Dakhil et al. (2025) shows that artificial intelligence-mediated speaking assessment can effectively improve students' speaking performance and communication willingness. This provides ideas for the construction of smart classrooms. In-depth exploration of the new paths by which smart classrooms can empower the enhancement of higher vocational students' willingness to communicate in English not only helps to solve the practical problems existing in current English teaching in higher vocational education and improve teaching quality but also lays a solid foundation for students'

future career development.

2. Current Situation and Influencing Factors of Higher Vocational Students' Willingness to Communicate in English

Drawing on a mixed-methods approach, this study surveyed 365 students across three higher vocational colleges in Anhui Province (92% valid response rate) and conducted in-depth interviews with 20 participants. The findings reveal critical insights: 68% of respondents identified "monotonous interactive formats in traditional classrooms" as a primary driver of oral expression anxiety; 42% emphasized the "lack of authentic vocational scenario practice" as a core barrier to low communication willingness. Statistical analysis further indicated that students who passed the English Proficiency Test Band A demonstrated significantly higher active communication willingness than non-passers. Qualitative data from interviews highlighted recurring themes: students frequently cited "fear of being mocked for pronunciation errors" and "inadequate timely corrective feedback from teachers" as key deterrents.

Overall, the results underscore that higher vocational students' willingness to communicate in English remains suboptimal. In classroom settings—the primary learning environment—most students exhibit passive participation in oral activities, often waiting for teacher-led questions rather than volunteering opinions. Outside the classroom, limited English-speaking environments and opportunities further suppress proactive communication. Even students with foundational language knowledge hesitate to speak in real-world scenarios due to fear of making mistakes and low self-confidence, hindering their ability to practice and refine communication skills. These challenges stem from three interrelated factors: student-specific attributes, teaching methodologies, and environmental constraints.

2.1. Students' Own Factors

Individual factors such as students' English foundation, learning motivation, and personality characteristics have a significant impact on their willingness to communicate in English. For students with a weak English foundation, they are more likely to encounter various difficulties in English communication, such as limited vocabulary leading to restricted expression and frequent mistakes due to poor grammar mastery. These difficulties not only hinder the effective transmission of information but also easily undermine their confidence in communication, gradually causing them to develop a fear of English communication and thus reducing their willingness to communicate in English. Learning motivation, as a key factor influencing students' learning behavior, also plays an important role in English communication. Students with insufficient learning motivation lack the internal driving force for English learning. They often regard English learning as a task that has to be completed rather than a need based on their own interests and future development. In this case, it is difficult for them to actively engage in English com-

munication activities. Even if they participate, they are difficult to fully immerse themselves and cannot fully exert their potential. In addition, personality characteristics are also one of the important factors affecting the willingness to communicate in English. Introverted students usually care more about others' evaluations. When speaking English in public, they will overly worry about their performance, fearing being laughed at or criticized for making mistakes. This tense and anxious emotion will suppress their desire to express, making them more reticent in English communication and reluctant to express their views easily.

2.2. Teaching Factors

The traditional English teaching model in higher vocational education has long been dominated by teacher-centered instruction. Excessive emphasis is placed on the teaching of grammar and vocabulary knowledge, while insufficient attention is paid to the cultivation of students' oral practice and communication abilities. In this teaching model, students are in a passive position of receiving knowledge and lack the opportunities to actively participate and practice. The monotony of teaching methods is also an important reason for the low willingness of students to communicate in English. In actual teaching, teaching activities lack interactivity and interest, making it difficult to stimulate students' interest in learning and enthusiasm for participation. For example, in the classroom, teachers may simply explain the text and analyze grammar, while students mechanically take notes, with few opportunities for oral practice and interactive communication. This monotonous teaching method easily makes students feel bored and gradually lose interest in English learning, let alone actively participate in English communication activities. In addition, the imperfect teaching evaluation system also restricts the improvement of students' willingness to communicate in English to a certain extent. Currently, most English teaching evaluations in higher vocational education place too much emphasis on written test scores, and the evaluation of students' oral expression and communication abilities is not comprehensive and objective enough. This evaluation method makes students focus more on preparing for written tests and neglect the cultivation of oral skills. Even if students have made efforts in oral English, they may not receive due recognition and encouragement due to the defects of the evaluation system, thus affecting their enthusiasm for improving their English communication abilities.

2.3. Environmental Factors

The lack of a strong English-language environment on campus is an important external factor affecting higher vocational students' willingness to communicate in English. In daily life, except for the English classes, students rarely have other scenarios where they can communicate in English. It is difficult for students to find opportunities and platforms for English communication on campus. Such a limited language input and output environment leads to a lack of English practice opportunities for students, making it impossible to effectively improve their Eng-

lish communication abilities and thus affecting their willingness to communicate. At the same time, the relatively low recognition of higher vocational students' English abilities in society also dampens students' enthusiasm for learning English and their willingness to communicate to a certain extent. In the job market and the general social perception, the English level of higher vocational students is often considered to be inferior to that of undergraduate students. This prejudice makes higher vocational students prone to self-doubt and lack of confidence when facing English communication scenarios, lacking the motivation to improve their English communication abilities.

3. Connotations and Characteristics of Smart Classrooms

3.1. Connotations of Smart Classrooms

Smart classrooms are a new type of classroom teaching model constructed under the guidance of modern educational concepts and by making full use of information technology means. They leverage technologies such as cloud computing, big data, and artificial intelligence to achieve intelligent teaching processes, personalized learning resource delivery, and diversified teacher-student interactions. Compared with traditional classrooms, smart classrooms break through the limitations of time and space, providing students with a more flexible and autonomous learning environment. In smart classrooms, teaching is not only about the imparting of knowledge but also focuses on cultivating students' thinking abilities, innovative abilities, and practical abilities, enabling students to learn how to learn while acquiring knowledge and enhancing their comprehensive qualities to meet the development needs of future society.

3.2. Characteristics of Smart Classrooms

- Smart classrooms possess remarkable characteristics such as intelligent teaching, rich learning resources, strong interactivity, and personalized learning support. In terms of intelligent teaching, smart classrooms can use artificial intelligence technology to deeply analyze students' online learning data, accurately grasp students' knowledge mastery levels, learning habits, and weak points. Based on these analysis results, the system can provide targeted teaching suggestions for teachers, helping teachers implement individualized teaching. For example, intelligent teaching tools such as intelligent speech evaluation systems and automatic homework-grading systems can provide real-time feedback on students' learning achievements, enabling students to understand their learning situation in a timely manner, identify problems, and make improvements. Smart classrooms integrate a vast amount of learning resources in various forms, including texts, pictures, audio, video, and animations. These resources not only cover content closely related to textbooks but also extend to a wide range of fields such as English movies, songs, news, and academic papers, providing students with rich and diverse learning materials. Students can independently select learning resources according to their interests and

needs, broaden their learning horizons, increase language input, and meet their personalized learning requirements.

- Strong interactivity is another prominent feature of smart classrooms. They build diversified interactive platforms for teachers and students, as well as among students. In the classroom, teachers can guide students to actively participate in classroom interactions through activities such as online questioning, group discussions, and role-playing. Students can use online collaboration tools to complete learning tasks together, cultivating teamwork spirit and communication skills. After class, teachers and students can also communicate through instant messaging tools and learning platforms, answering students' questions and sharing learning experiences, further promoting students' learning.
- Smart classrooms can provide personalized learning paths and guidance based on students' learning situations and characteristics. When students encounter problems during the learning process, they can obtain timely help and feedback from the system, solve their doubts, and improve their learning effectiveness. In addition, the system can automatically adjust the learning difficulty according to students' learning progress and abilities, providing challenging learning tasks to stimulate students' learning motivation and meet the personalized learning needs of different students.

4. Strategies for Smart Classrooms to Empower the Enhancement of Higher Vocational Students' Willingness to Communicate in English

4.1. Creating Real-Life Communication Scenarios with Smart Classrooms

Smart classrooms can utilize advanced technologies such as virtual reality (VR) and augmented reality (AR) to create vivid English communication scenarios for students. To enhance the authenticity of language practice, smart classrooms leverage VR technology to simulate vocational English scenarios. For example, in a hotel English course at a higher vocational college, students using VR to simulate foreign guest reception scenarios showed a 40% improvement in language fluency and a 28% reduction in vocabulary error rates during role-playing tasks. Similarly, in the Tourism Management program, the introduction of a VR-based Huangshan Scenic Area guide simulation system in English for Foreign Tour Guides enabled students to complete guest reception tasks through role-play. Post-training surveys showed that 83% of students agreed that "immersive scenarios enhanced their confidence to speak," with the completeness of oral expressions increasing from an average of 5.2 sentences per person to 8.7 sentences per person. In business English contexts, VR simulations of negotiation scenarios—where students assume roles like company managers or client representatives—enable practice in discussing cooperation matters, contract terms, and cross-cultural communication. These activities not only strengthen students' expressive accuracy but also

enhance their adaptability to unpredictable real-world interactions, thereby boosting communication willingness. Drawing on Ismail and Alharkan's (2024) research, which highlights how AI tools like ChatGPT provide learners with "real-life language engagement experiences" that enhance interactivity and motivation, smart classrooms can further integrate such technologies. By combining VR/AR scenarios with AI-driven feedback like instant pronunciation correction or dialogue suggestions, students are empowered to actively practice English in low-anxiety, high-relevance environments, ultimately bridging the gap between theoretical knowledge and practical competence.

4.2. Achieving Personalized Teaching with the Aid of Smart Classrooms

Teachers can use the big-data analysis function of smart classrooms to comprehensively understand the English learning situations and characteristics of each student and develop personalized learning plans for them. For students with a weak English foundation, teachers can push basic grammar and vocabulary learning resources and arrange targeted exercises to help them consolidate the foundation. For students with a higher English level, teachers can provide expansion learning content, such as English academic paper reading and English debate materials, to meet their higher-level learning needs. At the same time, teachers should adjust the teaching plan in a timely manner according to students' learning progress and feedback to ensure that the teaching content and methods match the actual needs of students, meet their personalized learning needs, improve learning effectiveness, and thus enhance students' confidence and willingness to communicate in English.

4.3. Carrying out Diverse Interactive Teaching Activities

AI tools have been applied to provide instant writing feedback in business English courses. In a case study on business email composition, students using AI-powered real-time error correction tools achieved a 55% improvement in revision efficiency and a 2.3-point increase in content logic scores on a 10-point scale. These tools, which may include grammar-checking platforms, natural language processing (NLP)-based feedback systems, or intelligent writing assistants, analyze text for grammatical accuracy, lexical appropriateness, and structural coherence, offering instant suggestions to enhance writing quality.

For group collaborative tasks, smart classrooms leverage AI-integrated platforms like DingTalk, Tencent Classroom, or specialized educational tools to facilitate online teamwork. For instance, teachers can assign projects such as English micro-film production, where students use AI-driven script analysis tools to refine dialogues, voice synthesis technologies for dubbing, or collaborative editing platforms with real-time translation features. In such scenarios, AI not only streamlines task execution but also enhances communication dynamics: students must negotiate ideas in English to complete scripts, filming, and post-production, while AI tools provide instant feedback on language usage. AlTwijri and Alghizzi (2024) suggest

that the use of AI interactive tools enhances students' willingness to participate in peer discussions, by reducing language barriers and creating a more inclusive and collaborative environment. This aligns with the study's findings that AI applications can significantly improve motivation and engagement among EFL learners.

By integrating diverse AI applications—from writing support to collaborative task management—smart classrooms create multi-layered opportunities for students to practice English in authentic, technology-embedded contexts, thereby strengthening both their communicative competence and collaborative skills.

4.4. Providing Diversified Evaluation with Smart Classrooms

Smart classrooms can achieve diversified evaluation of students' learning processes and achievements. In addition to the traditional examination-score-based evaluation, it can also evaluate students' learning attitudes and processes by analyzing students' online learning behaviors, such as learning duration, number of interactions, and assignment completion situations. At the same time, self-evaluation and peer-evaluation methods are introduced to enable students to understand their learning situations from different perspectives. After the completion of group-cooperative learning tasks, students evaluate their own and their group members' performances during the cooperation process, including aspects such as English expression ability and teamwork ability. Diversified evaluation can more comprehensively and objectively reflect students' comprehensive English levels, allowing students to see their progress and deficiencies and stimulating them to continuously improve their English communication abilities.

4.5. Cultivating Teachers' Smart Teaching Competencies

To address teachers' varying technical proficiencies, a three-tiered training system is proposed:

- Basic Level: Conduct smart tool operation workshop like Seewo Whiteboard, AI speech evaluation systems, requiring teachers to complete 20 hours of hands-on training within three months. Focus areas include real-time voting, instant feedback tools, and basic data analytics.
- Advanced Level: Establish a "smart teaching design case library" featuring exemplars like "VR scenario teaching + peer assessment". Teachers are encouraged to submit at least one innovative lesson plan per semester, with access to curated case studies on integrating VR, AR, and AI into lesson design.
- High-Level: Select technical leaders to participate in "industry-education integration" internships with enterprises, for instance, developing English teaching plugins with iFLYTEK. Aim to train 10% of teachers as "smart teaching mentors" annually, responsible for guiding peer workshops and evaluating classroom technology applications.

5. Conclusion

With their characteristics of intelligence, rich resources, strong interactivity, and

personalized learning support, provide an effective way to enhance higher vocational students' willingness to communicate in English. By creating real-life communication scenarios, achieving personalized teaching, carrying out diverse interactive teaching activities, and providing diversified evaluation, it is possible to stimulate students' interest in learning English, enhance their confidence in English communication, and thus improve their willingness to communicate in English. Practical cases have also proven the effectiveness and feasibility of the smart-classroom teaching model in enhancing higher vocational students' willingness to communicate in English. However, although smart classrooms have achieved certain results in enhancing higher vocational students' willingness to communicate in English, there are still some problems that need to be further studied and solved in the actual application process. For example, how to further optimize the technical support of smart classrooms to ensure the stability and smoothness of the teaching process; how to improve teachers' abilities to teach with smart classrooms to give full play to the advantages of smart classrooms; and how to strengthen the integration of smart classrooms with the extracurricular English-learning environment to provide more comprehensive English-learning support for students. Future research can focus on these issues to continuously improve the smart-classroom teaching model and provide more powerful support for the improvement of higher vocational students' English communication abilities. With the continuous development of information technology, smart classrooms will also continue to be updated and improved, bringing more opportunities and challenges to the reform of English teaching in higher vocational education. Educators should actively pay attention to the development trends of information technology, continuously explore the innovative application of smart classrooms in English teaching in higher vocational education, and make greater contributions to cultivating high-quality applied talents with international perspectives and good English communication abilities.

Fund Project

General Humanities and Social Sciences Research Project of Anhui Business College: "An Empirical Study on Higher Vocational Students' Willingness to Communicate in English under the Background of Smart Classrooms" (2024KYR18).

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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