World Journal of Education and Humanities
ISSN 2687-6760 (Print) ISSN 2687-6779 (Online)
Vol. 7 No. 6, 2025
www.scholink.org/ojs/index.php/wjeh

*Original Paper*

# Research on the Mechanism of the Impact of Artificial Intelligence Literacy on the English Learning Behavior Intention of Higher Vocational Students

Kexin Lin[1*]

[1] Department of Foreign Language Teaching, College of Hainan Vocational University of Science and Technology, Haikou, Hainan 571126, China

[*] Corresponding Author

Received: October 28, 2025 Accepted: December 11, 2025 Online Published: December 29, 2025

doi:10.22158/wjeh.v7n6p70 URL: http://dx.doi.org/10.22158/wjeh.v7n6p70

***Abstract***

*The artificial intelligence technology has experienced explosive growth and has permeated into every corner of society, reshaping people's lifestyles, work patterns, and learning methods. This article conducts an in-depth examination of how the three core competence elements of higher vocational college students - artificial intelligence literacy and learning outcomes - influence the decision-making mechanism of students' intentions to adopt AI tools to assist in English learning in an educational environment where generative AI technology is developing rapidly. By constructing a multi-dimensional theoretical analysis framework, this study focuses on analyzing the paths of interaction between these three key variables and the AI-assisted learning behavior intentions. This study uses the questionnaire survey method to collect data and employs the structural equation model for empirical testing. The research findings reveal that intelligent knowledge, intelligent skills, and intelligent thinking in artificial intelligence literacy significantly positively influence students' intentions for English learning behavior, while intelligent assessment cannot affect students' English learning behavior intentions; learning outcomes play a significant mediating role between artificial intelligence literacy and behavior intentions. The research results indicate the importance of enhancing students' technical literacy in the context of the artificial intelligence era for promoting language learning, providing theoretical basis and practical guidance for the reform of higher vocational English teaching. This study innovatively incorporates artificial intelligence literacy into the research field of language learning behavior, expanding the theoretical boundaries of educational technology application.*

***Keywords***

*Artificial intelligence literacy, Higher vocational students, English learning, Behavioral intention, Influence mechanism*

## 1. Introduction

During the process of English teaching reform in higher vocational colleges, the penetration of artificial intelligence technology has shown a multi-dimensional and deep integration trend. The intelligent teaching system, through machine learning algorithms, has achieved precise diagnosis of students' English abilities and personalized content sending. Various AI-assisted tools have significantly improved the timeliness and accuracy of teaching feedback in aspects such as speech evaluation and writing correction. The construction of virtual simulation environments has created highly realistic interactive scenarios for language practice. As one of the core capabilities in the digital age, the integration of artificial intelligence literacy with the English education system in higher vocational colleges deserves in-depth analysis. Currently, the vocational education field urgently needs to deconstruct how the cognitive ability of artificial intelligence can reshape the behavioral logic of students' foreign language learning. This involves technical acceptance, cognitive load theory, and complex interactions of learning motivation in the information-based teaching context. From the perspective of educational technology, exploring the transmission path of artificial intelligence literacy on foreign language learning behavioral intentions not only can reveal the internal mechanism of intelligent technology empowering language acquisition, but also can provide theoretical basis for constructing a vocational English teaching model that meets the needs of the intelligent era. This research has dual practical value: it not only helps to optimize the design of language courses that integrate artificial intelligence in higher vocational colleges, but also provides data support for formulating foreign language talent cultivation strategies under the background of digital transformation, and ultimately realizes the coordinated development of technical literacy and language ability.

When exploring the mechanism by which artificial intelligence literacy affects the learning behavior intentions of vocational college students, it is necessary to first clarify the multi-dimensional factors that influence learning behavior intentions. From the perspective of educational psychology, these influencing factors can be systematically classified into three categories: individual factors, environmental factors, and technical factors. At the individual level, students' self-efficacy plays a crucial role. Research shows that students with higher artificial intelligence literacy often demonstrate greater confidence in using intelligent tools for English learning. For example, students who can proficiently use intelligent voice assessment systems have significantly higher frequency of oral practice than those using traditional learning methods. The type of learning motivation also significantly affects behavior intentions. Students with instrumental motivation tend to use AI translation tools to complete assignments, while those with integrative motivation prefer interactive

applications such as intelligent conversation robots. At the environmental level, the completeness of educational institution infrastructure and technical support capabilities play a decisive role in the transformation of students' learning methods. Especially in the field of artificial intelligence technology application, educational institutions with advanced intelligent laboratories tend to cultivate a more positive digital learning atmosphere, and this environmental advantage is directly reflected in the adoption rate of intelligent language learning tools by the student group. Additionally, the usage habits of the peer group also have a significant demonstration effect. When an intelligent tool application trend is formed in the learning community, it naturally leads more individuals to adopt this new learning mode. The teacher group, as the key driver of educational technology application, The level of digital literacy and guidance ability of the teachers largely determines the depth of penetration and effectiveness of intelligent teaching tools in classroom teaching. This three-dimensional driving mechanism composed of institutional hardware support, peer influence, and teacher guidance jointly shapes the typical characteristics of technology application in the modern educational environment. In terms of technical factors, the practical value of product functions and the ease of user operation constitute two key evaluation dimensions. For example, the real-time error correction mechanism of intelligent grammar checking tools effectively improves text processing efficiency; while the voice input application significantly lowers the usage threshold through an intuitive interface. When examining the multiple factors that influence learning behavior intentions, we must recognize that these elements do not operate independently but form a dynamic system that is interrelated and mutually influential. Artificial intelligence literacy plays a crucial role in this system. Not only does it significantly enhance individuals' acceptance of emerging technologies as a direct driving force, but it also has a profound indirect impact by strengthening the psychological mechanism of self-efficacy, thereby comprehensively and powerfully promoting the formation and consolidation of learning behavior intentions. This complex interaction mechanism reflects the complex collaborative relationship between cognitive factors and technical factors in the field of educational technology application.

## 2. The Relevant Concepts

### *2.1 The Artificial Intelligence Literacy*

The rise of computer and network technologies has led to the demand for information literacy and digital literacy, thereby driving the education system into a new era that focuses on cultivating these two core skills. Artificial intelligence literacy, as the core competitiveness of the digital civilization era, is essentially a paradigm upgrade of the traditional concept of literacy in the context of the intelligent revolution. This concept system is constructed on a three-dimensional framework of technical cognition, practical application, and ethical evaluation: at the technical level, it requires the subject to deeply master the principles of cutting-edge technologies such as neural network architectures and deep learning algorithms, and be able to accurately assess the performance thresholds of various AI models;

at the application level, it is necessary to possess the ability to integrate intelligent systems into professional fields, including but not limited to using programming assistants like Codex for development, applying Transformer models to optimize business processes, and adopting high-level skills such as interactive stickiness of virtual teachers systems and adoption curves of generative AI feedback; at the ethical level, it emphasizes critical thinking on frontier issues such as algorithm transparency and data sovereignty. It is particularly noteworthy that the vocational education field currently exhibits significant characteristics of AI technology application, taking the English subject as an example, the behavioral patterns of learners have evolved into a complex index system with multiple dimensions, including the intensity of using intelligent grammar correction systems, the depth of integrating neural network translation tools, the stickiness of interaction of virtual teacher systems, and the adoption curve of generative AI feedback. This evolution poses a disruptive challenge to the traditional education assessment system.

### *2.2 The Learning Behavior Intention*

Behavioral intention refers to the extent to which students plan to utilize artificial intelligence in their higher vocational English learning activities. From the perspective of educational psychology, the willingness of higher vocational students to adopt artificial intelligence technology during their English learning process can be regarded as a multi-dimensional psychological construct. It profoundly reflects the systematic technological application tendency formed by learners after comprehensive consideration of their perception of the usefulness of the technology, assessment of ease of use, and social influencing factors. This tendency not only includes the cognitive level of technological acceptance judgment, but also involves the intensity of usage intention at the emotional level, and will directly translate into the frequency and depth of technological adoption in actual operations. Specifically, it is manifested as learners' planned and purposeful integration of AI tools such as voice recognition, intelligent grading, and personalized recommendations into their learning activities in each aspect of English listening, speaking, reading, and writing, demonstrating a continuous behavioral tendency.

## 3. The Theoretical Foundation

### *3.1 The Technology Acceptance Model (TAM)*

The Technology Acceptance Model (TAM) is an important theoretical framework in the field of information system research, which systematically explains the internal mechanism of individual users' adoption behavior towards emerging technologies. This theoretical model starts from two core dimensions: perceived usefulness and perceived ease of use, and constructs a causal relationship chain between technical characteristics and user acceptance. It provides a rigorous theoretical basis for predicting and explaining users' willingness to use technology. In practical applications, the Technology Acceptance Model not only guides product designers to optimize system interfaces and functional architectures, but also provides scientific decision-making basis for enterprises to formulate marketing

strategies for digital solutions. When students reach a high level of artificial intelligence literacy, they can more accurately evaluate the actual value of intelligent learning tools and form a more objective perception of their technical ease of use. This dual cognitive improvement will directly strengthen their decision-making tendency to choose and continuously use intelligent auxiliary tools in the process of English learning, reflecting the positive correlation mechanism between technical literacy and learning behavior. For example, students who can proficiently use AI voice recognition technology are more likely to practice oral English through intelligent conversation platforms.

### *3.2 The Theory of Planned Behavior (TPB)*

The Theory of Planned Behavior (TPB), as an important theoretical framework in the field of social psychology, systematically expounds the internal mechanism of human decision-making behavior. This theory holds that the formation of individual behavioral intentions is influenced by multiple factors in a comprehensive manner. Specifically, behavioral attitude reflects an individual's assessment of the specific behavioral outcome, subjective norms represent an individual's perception of the expectations of important others, and perceived behavioral control indicates an individual's judgment of the difficulty of performing the behavior. These three core elements jointly shape behavioral intentions through a complex cognitive processing process, thereby exerting a decisive influence on actual behavior. According to the Theory of Planned Behavior (TPB), digital literacy shapes learning intentions by influencing three dimensions: behavioral attitude, subjective norms, and perceived behavioral control. Students who master text generation technology tend to have a more positive attitude towards AI-assisted writing, and the demonstration effect of the peer group also strengthens their willingness to use it.

### *3.3 The Social Cognitive Theory*

The Social Cognition Theory explains the psychological operation mechanism of individuals in social environments, emphasizing that human behaviors are gradually formed through interactive processes such as observation, imitation, and reinforcement in a dynamic system. The framework of this theory holds that individuals do not passively accept external influences but actively interpret social information through their own initiative, integrating cognitive factors with environmental stimuli and behavioral feedback to form a three-dimensional interactive model. Among them, symbolic ability, predictive mechanism, self-regulation function, and self-reflection consciousness constitute the core cognitive characteristics that distinguish humans from other organisms. These psychological mechanisms enable individuals to transcend the limitations of direct experience and acquire complex social behavior patterns through observation and learning. The social cognition theory states that there is a bidirectional promoting relationship between artificial intelligence literacy and learning efficacy: students with high literacy acquire a sense of achievement by successfully using intelligent translation tools, thereby enhancing their intrinsic motivation to continue using technology for autonomous learning.

## 4. The Research Design

### *4.1 The Questionnaire Design*

This article will employ the questionnaire survey method to analyze the issues. By referring to the literature, the indicators for measuring artificial intelligence literacy, learning outcomes, and the intention to adopt artificial intelligence-assisted learning behaviors will be determined. Artificial intelligence literacy consists of 4 aspects with a total of 12 specific questions. Learning outcomes include 3 specific questions, and the intention for learning behaviors also includes 3 specific questions. The questionnaire survey consists of two parts. The first part is the basic information of the respondents, and the second part contains the items for independent variables and dependent variables. The brief content of the second part is shown in Table 1.

**Table 1. Brief Content of the Investigation on Independent and Dependent Variables**

| Independent Variable / Dependent Variable | Variable Name | Variable Definition |
|---|---|---|
| Artificial Intelligence Literacy(A) | Artificial Intelligent Knowledge(A1) | A11: Understand the basic concepts, development history and characteristics of artificial intelligence<br>A12: Understand the application scope and purposes of artificial intelligence<br>A13: Understand the current state of artificial intelligence and its future development trends |
| | Artificial Intelligent Skills(A2) | A21: Be capable of innovatively applying artificial intelligence technology to solve existing problems<br>A22: Have the ability to collect, organize and analyze data<br>A23: Be capable of innovatively applying artificial intelligence technology to solve existing problems |
| | Artificial Intelligent Thinking(A3) | A31: To be able to detect whether artificial intelligence has been used<br>A32: Be able to express one's own opinions on artificial intelligence technology<br>A33: Be able to detect and correct the unfairness brought about by artificial intelligence |
| | Artificial Intelligent Criteria(A4) | A41: Establish a correct value orientation and sense of responsibility for artificial intelligence<br>A4: Be familiar with and abide by the relevant policies and regulations of artificial intelligence |

| | | |
|---|---|---|
| Learning Effect(B) | Learning Effect(B) | A43: Be able to defend one's own legitimate rights and interests through legal means<br>B1: The proficiency level of the basic elements of language<br>B2: Practical application ability<br>B3: Understanding of the cultural background of English-speaking countries and sensitivity in cross-cultural communication |
| Learning Behavior Intention(C) | Learning Behavior Intention(C) | C1: Initiative in acquiring artificial intelligent knowledge<br>C2: Continuous investment intention in artificial intelligence<br>C3: Artificial intelligent technology acceptance degree |

*4.2 The Questionnaire Survey*

This research conducted a teaching survey among students majoring in English at higher vocational colleges. Using a strict purposive sampling principle, the research subjects were selected. Eventually, 239 students who met the criteria participated in this academic investigation. During the implementation of the research, strict adherence to academic ethical norms was followed. Before distributing the questionnaires, all potential participants were clearly informed of the research purpose, the scope of data usage, and confidentiality terms. It was particularly emphasized that all collected information was anonymized and used solely for teaching reform research purposes. At the same time, it was clearly informed to the participants that they had the freedom to choose whether to participate in this research project, fully ensuring the subjects' right to know and autonomy. A total of 215 questionnaires were returned, with a recovery rate of 90.01%, meeting the requirements of the questionnaire survey.

*4.3 The Basic Information of the Survey Participants*

The basic information of the survey subjects is shown in Table 2. From the table, it can be seen that the proportion of male students is 41.40%, while that of female students is 58.60%. Overall, there are more female students. The number of first-year students is slightly higher than that of second-year students. The proportion of students majoring in liberal arts is 60.47%, while that of students majoring in science and engineering is 39.53%. The majority of the survey subjects are liberal arts students.

**Table 2. Survey Subject Basic Information Form**

| Basic Information | | Number | Proportion |
|---|---|---|---|
| Gender | Male | 89 | 41.40% |
| | Female | 126 | 58.60% |
| Grade | First Grade | 112 | 50.10% |
| | Second Grade | 103 | 47.91% |
| Category | Liberal Arts | 130 | 60.47% |
| | Science and Engineering | 85 | 39.53% |

*4.4 The Reliability and Validity Analysis*

Cronbach's α coefficient, as a classic indicator for measuring the internal consistency of a measurement tool, indicates that when the α coefficient is within the range of 0.7 to 0.8, the scale has an acceptable level of reliability; reaching above 0.8 indicates good internal consistency. As shown in Table 3, the Cronbach's α coefficient of each sample variable in this survey is greater than 0.90, indicating that the collected sample data has a high level of reliability.

**Table 3. Cronbach's α Reliability Analysis**

| Variable | Number of Variables | Cronbach's Alpha |
|---|---|---|
| Artificial Intelligent Knowledge | 3 | 0.921 |
| Artificial Intelligent Skills | 3 | 0.925 |
| Artificial Intelligent Thinking | 3 | 0.915 |
| Artificial Intelligent Criteria | 3 | 0.924 |
| Learning Effect | 3 | 0.921 |
| Learning Behavior Intention | 3 | 0.901 |

Table 4 presents the validity analysis of the sample. From the table, it can be seen that the KMO value of the overall sample is 0.893, which is significant at the 1% level. This indicates that the collected data has good validity.

**Table 4. KMO & Bartlett's Test**

| KMO | | 0.893 |
|---|---|---|
| Bartlett's Sphericity Test | Approximate Chi-square | 54.97 |
| | df | 66 |
| | P | 0.000 |

## 5. The Impact of Artificial Intelligence Literacy Based on Structural Equation Model on the English Learning Behavior Intention of Higher Vocational Students

### *5.1 The Direct Influence of Artificial Intelligence Literacy on the Learning Behavior Intentions of Vocational College Students in English*

This paper uses the structural equation model to verify the direct influence of artificial intelligence literacy on the English learning behavior intention of vocational college students. Through the SPSS software and SmartPLS 4.0 software, the relationship diagram of the independent variable (artificial intelligence literacy) and the dependent variable (vocational college students' English learning behavior intention) in this paper is shown in Figure 1.

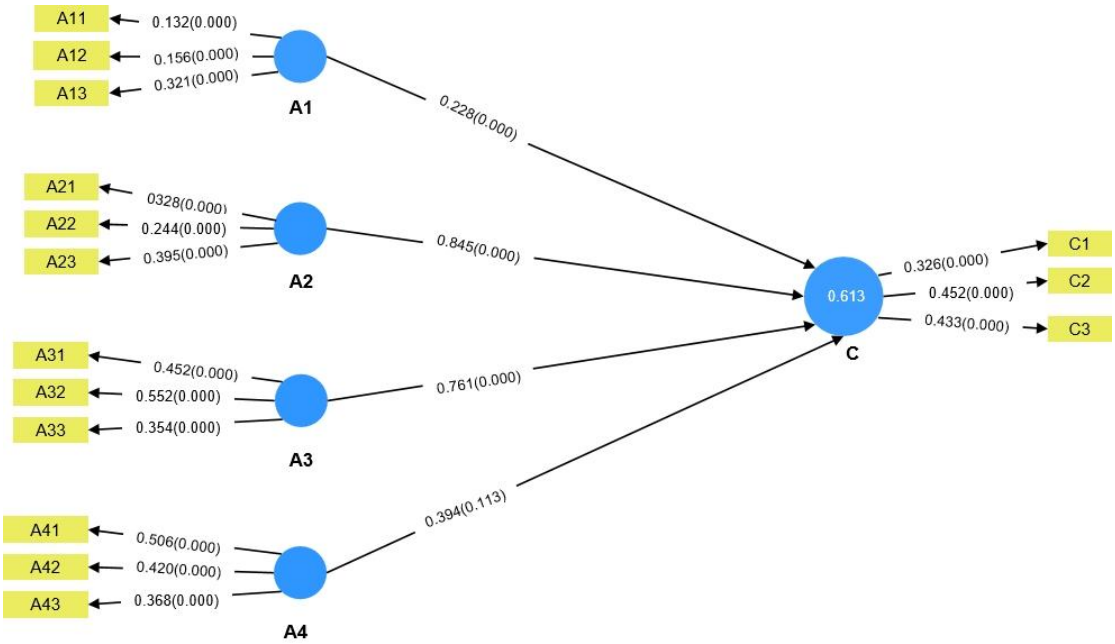


**Figure 1. The Direct Influence Diagram of Artificial Intelligence Literacy on The English Learning Behavioral Intentions of Vocational College Students**

As shown in Figure 1, the coefficient of the relationship between intelligent knowledge and the English learning behavioral intentions of vocational college students is 0.228, and it is significant at the 5% level. This indicates that when vocational college students come into contact with intelligent learning tools and digital educational resources, their active and continuous behavioral tendencies in English learning will be significantly enhanced. Specifically, the intelligent knowledge system, through technical features such as personalized recommendation algorithms, real-time feedback mechanisms, and immersive learning scenarios, can effectively stimulate language learning motivation. This technology-driven educational model transformation provides data support for the reform of foreign language teaching in vocational colleges.

The coefficient of the relationship between intelligent skills and the English learning behavioral intentions of vocational college students is 0.845, and it is significant at the 1% level. This indicates that the intervention of contemporary intelligent teaching methods can effectively stimulate the foreign language learning motivation of the vocational college student group and significantly strengthen their behavioral tendency to continuously participate in English courses. This finding validates the theoretical assumption of technology-enhanced learning and provides important insights for the English teaching reform in the vocational education field: by systematically integrating intelligent education tools such as artificial intelligence-assisted learning systems and adaptive language training platforms, the foreign language learning efficiency and participation of vocational college students can be substantially improved.

The coefficient of the relationship between intelligent thinking and the English learning behavior intention of vocational college students is 0.761, and it is significant at the 1% level. This indicates that students' acceptance and application ability of intelligent learning methods will substantially influence their subjective initiative and continuous commitment in the process of second language acquisition. The conclusion of this study provides important implications for the English teaching reform in vocational colleges, that is, systematic cultivation of students' digital learning thinking should be carried out to enhance their intrinsic driving force and persistent behavioral performance in English learning.

The coefficient of the relationship between intelligent precognition and the English learning behavior intention of vocational college students is 0.394, but it is not significant. This indicates that although from a numerical perspective, intelligent thinking ability may have a certain impact on the learners' English learning intentions, the extent of this influence cannot be excluded as the role of random factors in the current sample study. The research results may be affected by sample size limitations, the reliability and validity of the measurement tools, or other potential moderating variables. It is recommended that subsequent studies further verify this relationship by expanding the sample size, optimizing the measurement tools, or introducing more control variables.

*5.2 The Mediating Effect of the Learning Effect between Artificial Intelligence Literacy and English Learning Behavior Intention of Vocational College Students*

Table 5 presents the mediating effect of learning outcomes calculated through 5000 repeated sampling using the Bootstrap method. From the table, it can be seen that for different aspects of artificial intelligence literacy in relation to the English learning behavior intentions of vocational college students, learning outcomes have a significant mediating effect. This indicates that learning outcomes exhibit a significant mediating role between different dimensions of artificial intelligence literacy and the English learning behavior intentions of vocational college students. This finding clearly reveals the mechanism of the impact of artificial intelligence literacy on English learning behavior, that is, by enhancing the learning outcome as a key variable, it indirectly affects the final learning behavior intention. The study has confirmed the important bridging role of learning outcomes in the application

scenarios of artificial intelligence education, providing empirical evidence for understanding the complex relationship between technical literacy and language learning behavior.

**Table 5. Mesomeric Effect**

| Mesomeric Effect | Coefficient | Std | T | P |
|---|---|---|---|---|
| A1 -> B ->C | 0.125 | 0.096 | 3.59 | 0 |
| A2 -> B ->C | 0.167 | 0.084 | 4.36 | 0 |
| A3 -> B ->C | 0.239 | 0.034 | 3.21 | 0 |
| A4 -> B ->C | 0.129 | 0.054 | 1.59 | 0 |

*5.3 The Teaching Suggestions Based on Research Results*

Based on the empirical research results, it is suggested that vocational college English teaching should be reformed and innovated from the following dimensions:

Firstly, a personalized learning system empowered by AI technology should be constructed. Through intelligent diagnosis of students' English proficiency differences, different learning paths can be customized for students with different foundations. For example, for students with weak vocabulary, an optimized word book with memory curve algorithm can be automatically pushed, and for those with insufficient listening and speaking skills, an intelligent conversation robot can be matched for situational training.

Secondly, a "AI tutor + human teacher" dual-track teaching model should be developed. Research shows that students with higher AI literacy scores are more inclined to use the intelligent grading system. Teachers can delegate grammar correction and other mechanical tasks to AI, and focus on developing higher-order thinking. After adopting the intelligent writing evaluation system, the time for individual case guidance by teachers increased.

Thirdly, a dynamic AI technology training mechanism needs to be established. Behavioral intention differences stem from insufficient technical application ability. It is suggested to embed "technical workshops" in English courses to teach practical skills such as adjusting parameters of speech recognition software and methods of searching in the corpus. For example, AI simulation negotiation training can be integrated into business English courses to simultaneously enhance language ability and technical literacy.

In addition, the cultivation of emotional factors in AI applications should be emphasized. Technological anxiety can weaken students' learning motivation. It is recommended to adopt a progressive exposure strategy, transitioning from simple voice scoring games to complex human-machine collaboration tasks.

Finally, the course evaluation system should introduce multi-dimensional data tracking. In addition to traditional tests, process data such as the frequency of student interaction on the intelligent platform

and the evolution of error patterns should be collected to establish a comprehensive development file for comprehensive literacy. The learning dashboard with data visualization can enhance students' willingness for continuous learning.

## 6. The Research Conclusion

This study collected data through questionnaire surveys and conducted empirical tests using the structural equation model. The research found that intelligent knowledge, intelligent skills, and intelligent thinking in artificial intelligence literacy significantly positively influence students' intentions for English learning behaviors. Intelligent assessment cannot affect students' intentions for English learning behaviors; learning effectiveness plays a significant mediating role between artificial intelligence literacy and behavioral intentions. In the contemporary educational environment where artificial intelligence technology is developing rapidly, the research in this paper has important academic value for in-depth discussions on the correlation between technical ability cultivation and language acquisition among vocational college students. Integrating artificial intelligence application literacy with the foreign language learning process not only effectively expands the theoretical framework of educational technology but also provides a new practical path for the optimization and reconstruction of the English curriculum system in vocational colleges. The innovation of this study lies in breaking through the boundaries of traditional language teaching research and systematically introducing intelligent technology literacy as a key variable into the field of second language acquisition. The research conclusions have far-reaching guiding significance for promoting the digital transformation of vocational education.

## References

Cheng, S. (2025). The Value and Practical Pathways of Integrating Generative Artificial Intelligence into University English Teaching. *Xinxiang Da*ily, *23*(008).

Dong, W. Q. (2024). *Research on Thematic Teaching of High School Artificial Intelligence Courses Oriented to Smart Literacy*. Guangzhou University.

Guo, Me. N. (2025). *Construction of Assessment Index System and Scale Development and Application for College Students' Smart Literacy*. Shanxi University of Finance and Economics.

Hu, J. F. (2025). The Effectiveness Enhancement and Path Innovation of Vocational Education English Core Literacy Enabled by Artificial Intelligence Technology. *Knowledge Window (Teacher Edition)*, (08), 9-11.

Li, C. (2025). Research on Strategies for Enhancing the Effectiveness of College English Teaching Enabled by Artificial Intelligence Technology. *Modern English*, (13), 38-40.

Li, C. (2025). Research on the Artificial Intelligence Literacy of College English Teachers and Measures for Improvement. *English Square*, (02), 114-119.

Luo, L. (2025). *Application Status and Strategy Research of Generative Artificial Intelligence in Junior High School English Teaching*. Sichuan International Studies University.

Wen, B. Q. (2025). *Research on the Impact of Artificial Intelligence Literacy on College Students' Willingness to Use AIGC*. Shanxi University of Finance and Economics.

Xia, S. (2025). Research on the Mechanism of the Effect of Artificial Intelligence Literacy on the English Learning Behavior Intention of Higher Vocational Students. *China Education Technology Equipment*, (09), 151-156.

Xia, S. (2025). Research on the Mechanism of the Impact of Artificial Intelligence Literacy on the Learning Effect of Higher Vocational English. *Journal of Shandong Commercial Vocational College*, *25*(03), 65-69.

Zhang, H. Z. (2025). *Research on the Construction and Application of Evaluation Index System for College Students' Artificial Intelligence Literacy*. Guizhou Normal University.

Zhao, D. Y. (2025). *Research on the Adaptability of Preservice Teachers to Generative Artificial Intelligence*. Qufu Normal University.