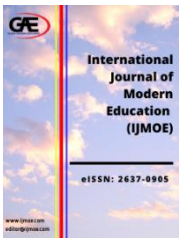
International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014



INTERNATIONAL JOURNAL OF MODERN EDUCATION (IJMOE)
www.ijmoe.com

GLOBAL ACADEMIC EXCELLENCE

THE IMPACT OF AI GAMIFIED TEACHING WITH LEARNING ENGAGEMENT AS THE MEDIATOR IN ORAL ENGLISH LANGUAGE ACHIEVEMENT, CHINA

Wang YanXuanDing[1*], Lee Keok Cheong[2]

[1] Department of Faculty, City University, Malaysia
Email: 1354820974@qq.com
[2] Department of Social Sciences, Faculty of Education, Veritas University College
Email: keokcheonglee@gmail.com
[*] Corresponding Author

Article Info:

Article history:
Received date: 30.09.2025
Revised date: 10.10.2025
Accepted date: 16.11.2025
Published date: 02.12.2025

To cite this document:

Wang, Y. X. D., Lee, K. C. (2025). The Impact of AI Gamified Teaching with Learning Engagement as the Mediator in Oral English Language Achievement, China. *International Journal of Modern Education, 7* (28), 170-183.

DOI: 10.35631/IJMOE.728014

Abstract:

This study aims to explore the impact of AI gamified teaching on oral English proficiency through learning engagement compared with traditional teaching methods in the Chinese context. In traditional English teaching, the conventional classroom model often leads to insufficient motivation for oral output and practice among learners. However, AI gamified teaching, which integrates intelligent interaction and game elements such as virtual scenarios and adaptive tasks, is believed to enhance oral proficiency by improving learning engagement through elements like task challenges and immediate feedback. The study analyzed the effects of intelligent feedback and immersive experiences in AI gamified teaching on learners' behavioral engagement (such as frequent dialogue practice), emotional engagement (such as pleasure), and cognitive engagement (such as strategic language use), and examined the mediating effect of learning engagement and the response differences among learners of different levels. It is expected that AI gamified teaching can optimize oral teaching effectiveness by enhancing multi-dimensional engagement, with the mediating effect of emotional engagement possibly being the most significant. Learners at a lower level may show a more significant increase in learning engagement under personalized guidance. This study hopes to confirm that AI gamified teaching can enhance learning engagement through the synergy of intelligent technology and game mechanisms, thereby providing references for teaching practice. It is suggested that teachers combine adaptive tasks and social competition designs and provide more personalized emotional support for students with low proficiency in English.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

Keywords:

AI, Gamified Teaching, English Oral Proficiency, Learning Engagement, Traditional Teaching Method

Introduction

This study aims to explore the impact mechanism of AI gamified teaching on English oral proficiency through learning engagement compared with traditional teaching methods in the Chinese context. In traditional English teaching, the conventional classroom model often leads to insufficient motivation for oral output and practice among learners. However, AI gamified teaching, which integrates intelligent interaction and game elements such as virtual scenarios and adaptive tasks, is believed to enhance oral proficiency by improving learning engagement through elements like task challenges and immediate feedback (Niño, J.,2024). This study analyzed the effects of intelligent feedback and immersive experiences in AI gamified teaching on learners' behavioral engagement (such as frequent dialogue practice), emotional engagement (such as pleasure), and cognitive engagement (such as strategic language use), and examined the mediating effect of learning engagement and the response differences among learners of different levels. It is expected that AI gamified teaching can optimize oral teaching effectiveness by enhancing multi-dimensional engagement, (Urmenetathe,2024) As Urmenetathe demonstrated in his 2024 research, mediating effect of emotional engagement possibly being the most significant. Learners at a lower level may show a more significant increase in learning engagement under personalized guidance. This study hopes to confirm that AI gamified teaching can enhance learning engagement through the synergy of intelligent technology and game mechanisms, thereby providing references for teaching practice. It is suggested that teachers combine adaptive tasks and social competition designs and provide more personalized emotional support for lower-level students.

Background

In today's era of accelerating globalization, English, as the main language of international communication, is becoming increasingly important. Among them, oral English proficiency is directly related to an individual's communication efficiency and quality on the international stage, and has become a key indicator for measuring comprehensive English literacy. However, upon an in-depth examination of the traditional English teaching system in China, it is not difficult to find that learners have significant deficiencies in terms of motivation for oral output and practical opportunities (Force, 2020). From the perspective of teaching models, traditional English classrooms have long been dominated by the notion of "emphasizing reading and writing while neglecting listening and speaking". Teachers often devote a great deal of time and energy in the classroom to the detailed explanation of grammar rules and the mechanical memorization of vocabulary, while the part of oral English teaching is often marginalized and only occupies a limited number of class hours. For instance, in a common English course schedule, the time allocated for grammar and vocabulary explanations may account for 70% to 80% of the total class hours, while only 20% to 30% is left for oral practice (Li & Han, 2020). This unbalanced teaching arrangement leaves students lacking systematic and sufficient opportunities for oral English training, making it difficult for them to effectively enhance their oral English skills in the classroom. Meanwhile, traditional classrooms mostly adopt a single teaching method where teachers lecture and students passively accept. The forms of interaction

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014
between teachers and students are relatively fixed, and the communication and collaboration among students are also insufficient. In a large-class teaching environment with a large number of students, it is difficult for teachers to meet the oral practice needs of each student, resulting in most students only being listeners in class and lacking the opportunity to express themselves actively(Payne & Whitney, 2019). Take a 50-minute English class as an example. If the class size is 50 students, under the ideal situation of evenly distributing time, each student only has one minute for oral expression. This is far from meeting the practical intensity required for the cultivation of oral English ability. Under the backdrop of exam-oriented education, the goals of English teaching have been distorted to a certain extent, and examination results have become the main orientation of teaching and learning. Whether it is the high school entrance examination, the college entrance examination, or various English proficiency tests, the written test score holds an absolute dominant position in the total score. The oral test section either accounts for a relatively small proportion or is even absent . This has led students, parents and teachers to focus their main energy on dealing with written tests, and pay insufficient attention to the cultivation of oral English skills. In order to achieve high scores in exams, students spend a great deal of time on written practice, reciting grammar provisions and spelling words, while neglecting the training of their oral expression ability. Take the college entrance examination English as an example. In some regions, the oral score is not included in the total score. Even in regions where there is an oral test, its proportion is relatively low, usually only 10 to 20 points, accounting for less than 15% of the total score of 150 points in the test paper (Ministry of Education, 2018). Under this evaluation system, students lack sufficient internal motivation to actively improve their oral English proficiency, believing that oral ability has a negligible impact on further education. The absence of a language environment is also an important factor restricting learners' motivation for oral output and practical opportunities. In China, English is not the native language, and students lack a natural and genuine English communication environment in their daily lives. Apart from the limited English class time each week, students have almost no opportunity to communicate in English in real situations. Even in the classroom, since the teaching language is mostly Chinese, teachers often use native language to explain and clarify in order to ensure that students understand the teaching content, which further compresses the time and space for students to come into contact with and use English (Molinari, 2022).Compared with English-speaking countries, Chinese students may spend less than one-tenth of their time immersed in a pure English environment each week. This makes it difficult for students to develop the habit of thinking in English and they are unable to skillfully apply the English knowledge they have learned in practice for oral expression, resulting in a slow improvement in their oral English ability. The trend of integrating AI technology with education, as well as the theoretical basis of gamified teaching in stimulating learning motivation, have played a crucial role in English teaching in China (Koumpouros, 2024).

In today's era of accelerating globalization, English, as the main language of international communication, is becoming increasingly important. Among them, oral English proficiency is directly related to an individual's communication efficiency and quality on the international stage, and has become a key indicator for measuring comprehensive English literacy. However, upon an in-depth examination of the traditional English teaching system in China, it is not difficult to find that learners have significant deficiencies in terms of motivation for oral output and practical opportunities.

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

From the perspective of teaching models, traditional English classrooms have long been dominated by the notion of "emphasizing reading and writing while neglecting listening and speaking". Teachers often devote a great deal of time and energy in the classroom to the detailed explanation of grammar rules and the mechanical memorization of vocabulary, while the part of oral English teaching is often marginalized and only occupies a limited number of class hours. For instance, in a common English course schedule, the time allocated for grammar and vocabulary explanations may account for 70% to 80% of the total class hours, while only 20% to 30% is left for oral practice. This unbalanced teaching arrangement leaves students lacking systematic and sufficient opportunities for oral English training, making it difficult for them to effectively enhance their oral English skills in the classroom. Meanwhile, traditional classrooms mostly adopt a single teaching method where teachers lecture and students passively accept. The forms of interaction between teachers and students are relatively fixed, and the communication and collaboration among students are also insufficient. In a large-class teaching environment with a large number of students, it is difficult for teachers to meet the oral practice needs of each student, resulting in most students only being listeners in class and lacking the opportunity to express themselves actively. Take a 50-minute English class as an example. If the class size is 50 students, under the ideal situation of evenly distributing time, each student only has one minute for oral expression. This is far from meeting the practical intensity required for the cultivation of oral English ability. Under the backdrop of exam-oriented education, the goals of English teaching have been distorted to a certain extent, and examination results have become the main orientation of teaching and learning. Whether it is the high school entrance examination, the college entrance examination, or various English proficiency tests, the written test score holds an absolute dominant position in the total score. The oral test section either accounts for a relatively small proportion or is even absent. This has led students, parents and teachers to focus their main energy on dealing with written tests, and pay insufficient attention to the cultivation of oral English skills. In order to achieve high scores in exams, students spend a great deal of time on written practice, reciting grammar provisions and spelling words, while neglecting the training of their oral expression ability. Take the college entrance examination English as an example. In some regions, the oral score is not included in the total score. Even in regions where there is an oral test, its proportion is relatively low, usually only 10 to 20 points, accounting for less than 15% of the total score of 150 points in the test paper. Under this evaluation system, students lack sufficient internal motivation to actively improve their oral English proficiency, believing that oral ability has a negligible impact on further education. The absence of a language environment is also an important factor restricting learners' motivation for oral output and practical opportunities. In China, English is not the native language, and students lack a natural and genuine English communication environment in their daily lives. Apart from the limited English class time each week, students have almost no opportunity to communicate in English in real situations. Even in the classroom, since the teaching language is mostly Chinese, teachers often use Chinese to explain and clarify in order to ensure that students understand the teaching content, which further compresses the time and space for students to come into contact with and use English. Compared with English-speaking countries, Chinese students may spend less than one-tenth of their time immersed in a pure English environment each week. This makes it difficult for students to develop the habit of thinking in English and they are unable to skillfully apply the English knowledge they have learned in practice for oral expression, resulting in a slow improvement in their oral English ability. The trend of integrating AI technology with education, as well as the theoretical basis of gamified teaching in stimulating learning motivation, have played a crucial role in English teaching in China.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

Research Questions

RQ1: Can AI gamified teaching significantly improve learners' oral English performance?
RQ2: What is the mediating variable of learning engagement between AI gamified teaching and oral English performance?

Research Significance

1. Improve the theoretical system of educational technology: Currently, research on AI and gamified teaching mostly focuses on application effects, with insufficient exploration of their deep-seated influence mechanisms. By exploring how AI educational applications and gamified teaching affect the learning process, it can fill theoretical gaps, reveal the intrinsic logic of the collaborative influence of intelligent technologies and game elements on learning, provide more systematic and scientific theoretical support for the field of educational technology, and promote the transformation of educational theory from "experience-driven" to "mechanism-oriented".

2. Guide the optimization of educational product design: Clarifying the influence mechanism helps developers design AI educational products and gamified teaching plans in a targeted manner. For instance, if research confirms that emotional investment is a key mediating variable, developers can enhance emotional incentive functions such as virtual character interaction and achievement feedback. If it is found that adaptive tasks have a significant impact on cognitive input, the AI algorithm can be optimized to achieve more precise learning path planning and enhance the educational value of the product.

3. Promote innovative transformation of educational models: Traditional teaching models are difficult to meet personalized learning needs, while the integration of AI and gamified teaching provides an opportunity for transformation. A thorough analysis of its influencing mechanism can provide teachers with innovative teaching strategies, such as integrating gamification elements into classroom activities, using AI to achieve stratified teaching and real-time feedback, promoting the shift of teaching from "teaching-oriented" to "learning-oriented", and enhancing classroom interactivity and student participation.

4. Promoting educational equity development: The application of AI in education and gamified teaching have the advantages of breaking through the limitations of time and space and lowering the threshold for accessing high-quality educational resources. After clarifying its influence mechanism, intelligent educational tools can be more efficiently promoted to areas with scarce educational resources. Through personalized learning support, regional and teacher gaps can be bridged, providing fair learning opportunities for students from different backgrounds and facilitating balanced educational development.

5. Adapt to future educational demands: In the era of rapid development of artificial intelligence, education needs to cultivate students' digital literacy and innovation capabilities. Understanding the influence mechanism of AI educational applications and gamified teaching can help educators grasp the direction of technology empowering education, plan curriculum design and teaching methods in advance, enable students to

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

adapt to the future intelligent learning environment, and enhance their core competitiveness.

Literature Review

Research Status of AI Gamified Teaching

AI gamified teaching is booming and has become a research hotspot in the field of education. (Geleta et al., 2023). It integrates AI technology with gamification elements, bringing learners a brand-new experience. Research has confirmed that AI gamified teaching can significantly enhance students' learning engagement and learning outcomes.(Holmes et al., 2023)A study in 2023 indicated that students participating in AI-enhanced gamified learning had a 30% higher level of learning engagement compared to traditional teaching.(Holmes et al., 2023) In practical applications, it covers multiple stages from K12 to higher education and involves multiple disciplines such as languages, programming, and art design. However, at present, there are also challenges such as technological adaptability and the transformation of teachers' roles. (Holmes et al., 2023) In the future, continuous exploration is needed in optimizing technology and teacher training to promote its wider and more effective application.

Gamified Teaching

Gamified Teaching, or game-based teaching, refers to the intentional integration of game elements and mechanisms into non-game teaching contexts, such as classrooms and learning activities, with the aim of stimulating students' learning motivation, enhancing their engagement, and improving learning outcomes. (John et al., 2023) Its essence is not simply playing games in the classroom, but rather borrowing core features from games such as points, badges, leaderboards, levels, tasks, and instant feedback, and through meticulous teaching design, allowing students to experience a sense of achievement, challenge, and immersion similar to that in games during the learning process. The core objective of gamified teaching is to enable students to learn in an actively engaged state, promoting the acquisition of knowledge and the enhancement of skills through psychological drivers such as a sense of achievement, competition, and cooperation. For instance, in an English class, teachers can design oral practice as a series of tasks to be completed, with students earning points and badges upon completion, thereby encouraging continuous practice; in mathematics learning, problems can be structured as different levels, with students unlocking more challenging tasks by accumulating experience points. (Smiderle, R.,2020) Many online learning platforms (such as Kahoot!, Classcraft, Quizizz) are also leveraging similar mechanisms to combine quizzes, feedback, and leaderboards, enhancing classroom interactivity and fun. The theoretical underpinnings of this teaching method include Self-Determination Theory, Constructivist Learning Theory, and Flow Theory. Self-Determination Theory emphasizes that autonomy, competence, and relatedness are key drivers of learning; Constructivist Theory holds that learners should actively construct knowledge in real-world contexts and through interaction; and Flow Theory stresses the importance of balancing challenges with skill levels to enable learners to enter a highly focused and engaged "flow" state. In summary, the core value of Gamified Teaching lies in making the classroom experience as engaging as a game, but the ultimate goal remains the achievement of high-quality learning and long-term knowledge retention.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

Advantages and Disadvantages of Gamified Teaching

Gamified teaching enhances students' motivation and engagement by introducing elements such as points, badges, leaderboards, feedback, and tasks in non-game learning environments. Some precise studies have shown that educational designs incorporating these game elements can lead to a 25% - 30% increase in student participation and a 15% - 20% improvement in test scores, as well as a 20% or higher increase in knowledge retention (Jun, Mao & Lucas, Terry. , 2024). For instance, online experiments have demonstrated that the success rate and pass rate of the experimental group significantly exceed those of traditional and purely online teaching methods, highlighting the potential of gamified learning in enhancing students' classroom participation and reducing dropout rates (Lampropoulos, G., & Sidiropoulos, A. , 2024). Additionally, systematic reviews indicate that in EFL/ESL teaching, the implementation of gamification can improve language skills, emotional attitudes, and comprehensive abilities (Zhang, S., & Hasim, Z., 2025). However, gamification also comes with some notable negative effects. The first and foremost is the "novelty effect": initially, novelty boosts motivation, but over time, this effect may rapidly diminish, thereby affecting long-term learning motivation (Zhang, S., & Hasim, Z., 2025). Some studies specifically point out that when users overly focus on elements such as badges and leaderboards, they may deviate from learning goals and even develop problems such as time waste and superficial understanding (Jun, Mao & Lucas, Terry. , 2024). In more macroscopic systematic mapping studies, elements such as badges, leaderboards, and points are frequently associated with poor performance, decreased motivation, lack of comprehension, cheating, and system abuse (Zhang, S., & Hasim, Z., 2025). EFL/ESL studies also indicate that these technical issues, short-term effects, and negative competition impacts remain significant (Zhang, S., & Hasim, Z., 2025). From an ethical perspective, "Ethical Challenges in Gamified Education" emphasizes that gamified education has risks of power dynamics imbalance, insufficient voluntariness and confidentiality, cognitive manipulation, and social comparison, and provides corresponding mitigation principles (Lampropoulos, G., & Sidiropoulos, A. , 2024). In terms of technology and resources, research also points out that uneven equipment and network resources, insufficient technical training, and limited teacher training and time investment may hinder the effective implementation of gamified teaching. Furthermore, excessive reliance on extrinsic rewards (such as badges) may weaken students' interest in knowledge itself and their intrinsic motivation, leading to a decline in learning quality. Although the competition mechanism can stimulate some learning motivation, it may undermine the confidence of students with lower grades, creating an unhealthy competitive atmosphere.

Methodology

Research Paradigm and Design

This study will adopt a mixed research paradigm, by combining the advantages of quantitative research and qualitative research, so as to systematically explore the impact of artificial intelligence gamification teaching on Chinese students' English oral proficiency scores and the mediating role of learning engagement.

In terms of research design, the researchers will employ a quasi-experimental research method. By setting up and reasonably allocating the experimental group and the control group, and through the comparative research method of teaching models, to compare the differences in learning effects under different teaching models. The experimental group will adopt the artificial intelligence gamification teaching model, such as an oral training system integrating

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014
voice recognition, real-time feedback, task challenges, etc. The control group will adopt the traditional English oral teaching model, such as classroom lectures, group conversations, teacher corrections, etc. The experimental period is set at 12-16 weeks to ensure the stability of the teaching intervention effect. At the same time, combined with the interview method and observation method, to more accurately collect students' subjective experiences and behavioral manifestations of the teaching model, providing accurate data for quantitative results.

Selection of Research Subjects

The research subjects are non-English major students in Chinese university. The sample selection adopts stratified cluster sampling method. The researcher will choose two class of students as the sample of the research. Both classes are selected from university A ,and each group has a sample size of approximately 50 people. According to krejcie and morgan table calculation, the total sample size is 80 people, but to ensure the completeness of the data and the feedback of the sample. The researchers will select 100 people to meet the sample size requirement for statistical analysis.

Definition and Measurement of Variables

The independent variable is different teaching models, artificial intelligence gamification teaching and traditional teaching. The researchers integrated the intervention measures of the two teaching models into each stage of the ADDIE model to make it more systematic and operational. The ADDIE model is a systematic framework used in instructional design to guide the creation of effective learning experiences. It consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. In the Analysis stage, instructional designers identify the learning needs, goals, target audience, and constraints. The Design stage focuses on planning the instructional strategy, setting learning objectives, organizing content, and deciding assessment methods. During Development, the actual instructional materials−such as lessons, activities, multimedia resources, and assessments−are created based on the design plan. The Implementation stage involves delivering the training or course to learners, ensuring that facilitators are prepared and resources are ready. Finally, in the Evaluation stage, the effectiveness of the instruction is assessed, including both formative evaluation (conducted during the design and development phases) and summative evaluation (conducted after implementation to measure learning outcomes and overall impact). The ADDIE model is valued for its structured approach, adaptability, and emphasis on continuous improvement. Based on the ADDIE model, the independent variable design divided the intervention framework of the teaching models into two types: artificial intelligence gamification teaching (experimental group) and traditional teaching (control group). The analysis, design, development, implementation, and evaluation based on the ADDIE model were used for the research.

Analysis Stage

Both models first completed the analysis of learners' characteristics. For example, cognitive level, learning motivation, technology acceptance, knowledge acquisition, skill application, and the organization of teaching content to ensure consistency of core knowledge points.

In addition, there was a differentiation of emphasis for different teaching models. Firstly, the experimental group, which is artificial intelligence gamification teaching, would additionally analyze learners' preferences for game elements, such as reward mechanisms and role interaction forms. Then, the traditional teaching model in the control group would focus more

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014
on analyzing the efficiency of knowledge transmission in traditional classrooms, such as attention maintenance and interaction frequency.

Design Stage

The teaching strategy design and task grading design of artificial intelligence gamification teaching would clearly define the core functional modules of the gamification system and break down the knowledge points into phased tasks, such as basic level, intermediate level, and challenging level. Each completed stage can unlock new content. Thus, the point reward mechanism is triggered, that is, virtual game points are issued based on task completion degree and accuracy rate, which can be exchanged for virtual props or privileges or can be redeemed for physical gifts. Through the cooperation of artificial intelligence software with the regular teaching process, the frequency and time of students' use are controlled, and the role of the teacher is clarified as a "guide", with responsibilities including answering complex problems that the system cannot handle, monitoring learning data, and adjusting task difficulty. The strategy design and implementation of traditional teaching would adopt the "lecture + blackboard writing + paper exercises" mode, explaining knowledge in accordance with the logical sequence of the knowledge points, and consolidating the content through classroom questions and homework. During the teaching process, the role of the teacher is "leader", responsible for direct teaching, demonstration, and homework correction.

Development

The experimental group conducting the gamification of artificial intelligence education will develop and debug the gamification teaching system, ensuring that the functional modules operate normally, such as task triggering, score settlement, and character interaction logic. By creating corresponding digital learning resources, such as animated demonstrations and interactive exercises, it will be seamlessly integrated with the gamification system. Additionally, they can provide system operation training for teachers to ensure they master the skills of data viewing and guidance.

The traditional teaching control group will mainly develop traditional teaching materials, such as PPT presentations, paper handouts, and exercise sets.

Design specific classroom interaction sessions, such as group discussions and group activities, and their specific procedures.

Implementation

The participants in the artificial intelligence gamification teaching experimental group log in to the gamification system through terminals and complete tasks at the set frequency. The system automatically records learning data, such as task completion rates and the scores obtained. Teachers view the background data in real time and provide personalized guidance to students who are behind in progress or encountering difficulties, rather than directly giving lectures.

The researchers will select teachers with experience in gamification teaching and the use of AI to serve as the teaching group's instructors, to ensure that teachers better utilize AI and gamification teaching during the teaching process.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

The teachers in the control group will conduct classroom teaching according to the traditional teaching plan, emphasizing key points by writing on the blackboard and organizing paper-and-pencil exercises. After class, they will provide learning feedback by grading homework, and the classroom teaching mainly adopts the "explanation - questioning - correction" model.

Evaluation

The experimental group further evaluated the effectiveness of game elements, such as the impact of the point system on motivation, the satisfaction of role interactions, and the adaptability of the teacher-led strategies.

The control group focused on evaluating the efficiency of knowledge transmission during the lecture and the timeliness of practice feedback.

Through the structured design of the ADDIE model, the intervention measures of the two teaching methods were clearly defined as a differentiated operation throughout the "analysis - design - development - implementation - evaluation" process, ensuring that the definition of independent variables is clear, repeatable, and comparable.

The dependent variable is English oral performance. The researchers will measure it from three dimensions, namely accuracy, fluency, and complexity. That is, grammar, pronunciation accuracy rate. The speed of oral speech, the number of pauses. And the lexical diversity, sentence complexity of using words. The IELTS oral assessment scale will be used as a standardized testing tool for the test.

The mediating variable is learning engagement. The learning engagement scale will be used to measure the frequency of classroom interaction, task completion degree, learning interest, anxiety level, and the use of deep learning strategies by students, such as reflection, summary. And it will be measured through classroom observation records.

Data Collection Methods

The researchers will adopt the method of pre-tests and post-tests, and draw on the test questions related to English oral communication in Abdullah's 2019 research results to collect data. The researchers will select students from two classes as the experimental samples. Before the start of the experiment, both groups of students will undergo a pre-test of English oral communication ability and a learning engagement scale based on the content of Mazel (J. P.)'s 2013 study to ensure the homogeneity of the two groups. After the experiment, the same test papers will be used for a follow-up test of English oral communication ability and a tracking survey of learning engagement, to compare the differences between the two groups. The researchers will also collect the learning behavior data of the students in the experimental group, such as login duration, task completion progress, and the frequency of using game elements. At the same time, the participation behaviors of the two groups of students in the classroom will be recorded through classroom videos and observation record sheets.

Expected Results and Discussion

Based on the support of various theories and the results of previous studies, the researchers expected that the post-test results would be much better than the pre-test results.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014

Relationship between Gamification Teaching and Learning Engagement

Based on the theory of gamification teaching, the characteristics such as fun, challenge, interactivity, and reward mechanism possessed by gamification teaching can effectively stimulate students' learning interest and participation motivation. In English oral language learning, it is expected that gamification teaching can significantly enhance students' learning engagement. From the perspective of emotional engagement, interesting game forms can make students more actively engage in English oral language learning, reduce their fear of speaking English, and enhance their learning enthusiasm; in terms of cognitive engagement, the tasks and questions in the game will prompt students to think actively, analyze, and apply English knowledge, deepening their understanding and mastery of the language; in terms of behavioral engagement, the interactivity and competitiveness of the game will motivate students to participate more in classroom oral language practice, group discussions, and other activities, and increase the frequency of self-study after class. Moreover, different gamification teaching models may have differences in enhancing learning engagement. It is expected that the cooperative gamification teaching model, in the context of China's class teaching system and collectivist culture, can better promote interaction and collaboration among students compared to the individual competitive model, and can improve the overall students' learning engagement level.

Relationship between Learning Engagement and English Oral Language Scores

According to the theory of learning engagement and the theory of second language acquisition, the three dimensions of learning engagement are closely related to English oral language scores. It is expected that the higher the learning engagement, the better the students' English oral language scores. Students with high emotional engagement will more actively seek oral language practice opportunities, be more relaxed in communication, and help improve the fluency of oral expression; students with deep cognitive engagement can better understand and apply grammatical rules, vocabulary, etc., making oral expression more accurate and rich; students with more behavioral engagement will improve their pronunciation, intonation, etc., of oral language through a large amount of oral output practice, and accumulate expression experience, thereby improving their English oral language scores. Moreover, the three dimensions of learning engagement may have different weights on English oral language scores. It is expected that the impact of the amount of oral practice in behavioral engagement on scores is relatively significant, while emotional engagement and cognitive engagement indirectly affect English oral language scores through influencing behavioral engagement.

Relationship between Gamification Teaching, Learning Engagement, and English Oral Language Scores

In summary, it is expected that gamification teaching will have a positive impact on English oral language scores through enhancing students' learning engagement, that is, learning engagement plays a mediating role between gamification teaching and English oral language scores. In the gamification teaching environment, students' learning engagement levels are improved, which is reflected in the improvement of English oral language scores. Moreover, the Chinese cultural context will have a moderating effect on the above relationship. It is expected that in regions with less pressure from exam-oriented education and relatively abundant teaching resources, the positive impact of gamification teaching on learning engagement and English oral language scores will be more obvious; while in environments with greater exam pressure, the effect of gamification teaching may be constrained to some extent, but it can still improve students' learning engagement and English oral language scores

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014
to a certain extent. At the same time, game content designed based on Chinese traditional culture can enhance students' cultural identity, further strengthening the positive impact of gamification teaching on learning engagement and English oral language scores.

Conclusion and Recommendations

Research Conclusion

Based on theoretical derivation and existing research inference, in the educational environment of China, gamification teaching has a significant effect on enhancing students' English oral language learning engagement. Specifically, the fun of gamification teaching can effectively reduce students' fear of English oral language learning, making them more willing to engage emotionally in a relaxed and pleasant atmosphere, such as in role-playing games, students can more naturally integrate into the situation and actively express emotions; Its challenge can stimulate students' thirst for knowledge, prompting them to conduct in-depth cognitive thinking when completing game tasks. For example, in an English knowledge competition game, students will actively study grammar, vocabulary, etc. to win, thereby enhancing their cognitive engagement. Meanwhile, the interactive nature and reward mechanism can fully mobilize students' participation enthusiasm, increasing their oral practice behaviors both inside and outside the classroom. For instance, when completing game tasks in groups, the frequency of students' communication and interaction significantly increases, and their willingness to practice independently after class also becomes stronger. Moreover, the cooperative game-based teaching model is more in line with our collective culture. Under this model, students can better feel the power of the team, and the overall learning engagement is more prominent. Learning engagement is significantly positively correlated with English oral performance. Among them, behavioral engagement has the most direct impact on English oral performance. The more times and longer the students participate in oral practice, the more obvious the improvement in pronunciation accuracy, fluency, and other aspects; emotional engagement indirectly prompts them to participate in oral practice more actively through influencing their learning attitude, thereby improving their performance; cognitive engagement helps students better understand and apply language rules, making oral expression more logical and accurate, and also plays an indirect role in improving performance. Overall, learning engagement plays a crucial mediating role between game-based teaching and English oral performance. Game-based teaching first affects students' learning engagement, by enhancing the engagement level, and ultimately promotes the improvement of English oral performance. At the same time, factors such as exam pressure and teaching resources in the Chinese context will have a moderating effect on this relationship. In regions with less exam pressure, students have more time and energy to participate in game-based teaching activities, and the improvement in learning engagement and performance is more significant; schools with abundant teaching resources can better design and implement game-based teaching, and the effect is also better. In addition, games integrating traditional culture can enhance students' cultural identity, further stimulate their learning interest, and strengthen the positive impact of game-based teaching on learning engagement and English oral performance.

Recommendations

In the future, the sample scope can be expanded to include students from different grades and regions, thereby enhancing the generalizability of the conclusions. In-depth exploration of the applicable scenarios of different gamification models is necessary, such as the role of competitive games in short-term training. By integrating information technology, a blended

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014
online and offline gamification teaching model can be developed. Long-term tracking research should be conducted to observe the continuous impact on students' English oral proficiency, providing a more comprehensive basis for optimizing teaching practices.

Acknowledgements
The authors would like to acknowledge and extended special gratitude to the Global Academic Excellence (M) Sdn Bhd, who granted the Publication Grant Scheme for this project.

References

Abdullah, M. Y., Hussin, S., & Ismail, K. (2019). Implementation of flipped classroom model and its effectiveness on English speaking performance. International Journal of Emerging Technologies in Learning (iJET), 14(9), 130. https://doi.org/10.3991/ijet.v14i09.10348

Force, N. C. T. (2020). Computing curricula 2020. https://doi.org/10.1145/3467967

Geleta, M., Xu, J., Loya, M., Wang, J., Singh, S., Li, Z., & Gago-Masague, S. (2023). Maestro: A gamified platform for teaching AI robustness. Proceedings of the AAAI Conference on Artificial Intelligence, 37(13), 15816‑15824. https://doi.org/10.1609/aaai.v37i13.26878

Holmes, W., Bialik, M., & Fadel, C. (2023). Artificial intelligence in education. In Artificial intelligence in education (pp. 621‑653). https://doi.org/10.58863/20.500.12424/4276068

John, D., Hussin, N., Zaini, M. K., Ametefe, D. S., Aliu, A. A., & Caliskan, A. (2023). Gamification equilibrium: The fulcrum for balanced intrinsic motivation and extrinsic rewards in learning systems. International Journal of Serious Games, 10(3), 83‑116. https://doi.org/10.17083/ijsg.v10i3.633

Jun, M., & Lucas, T. (2024). Gamification elements and their impacts on education: A review. Multidisciplinary Reviews, 8, 2025155. https://doi.org/10.31893/multirev.2025155

Koumpouros, Y. (2024). Revealing the true potential and prospects of augmented reality in education. Smart Learning Environments, 11(1). https://doi.org/10.1186/s40561-023-00288-0

Lampropoulos, G., & Sidiropoulos, A. (2024). Impact of gamification on students' learning outcomes and academic performance: A longitudinal study comparing online, traditional, and gamified learning. Education Sciences, 14(4), 367. https://doi.org/10.3390/educsci14040367

Li, J., & Han, H. (2020). Learning to orient toward Myanmar: Ethnic Chinese students from Myanmar at a university in China. Language, Culture and Curriculum, 34(4), 360‑378. https://doi.org/10.1080/07908318.2020.1858095

Mazer, J. P. (2013). Validity of the student interest and engagement scales: Associations with student learning outcomes. Communication Studies, 64(2), 125‑140. https://doi.org/10.1080/10510974.2012.727943

Molinari, J. (2022). What makes writing academic. https://doi.org/10.5040/9781350243958

Niño, J. R. G., Delgado, L. P. Á., Chiappe, A., & González, E. O. (2024). Gamifying learning with AI: A pathway to 21st-century skills. Journal of Research in Childhood Education, 1‑16. https://doi.org/10.1080/02568543.2024.2421974

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume 7 Issue 28 (December 2025) PP. 170-183
DOI: 10.35631/IJMOE.728014
Payne, J. S., & Whitney, P. J. (2019). Developing L2 oral proficiency through synchronous CMC: Output, working memory, and interlanguage development. CALICO Journal, 20(1), 7‑32. https://doi.org/10.1558/cj.v20i1.7-32

Smiderle, R., Rigo, S. J., Marques, L. B., Coelho, J. A. P. de M., & Jaques, P. A. (2020). The impact of gamification on students' learning, engagement and behavior based on their personality traits. Smart Learning Environments. https://slejournal.springeropen.com/articles/10.1186/s40561-019-0098-x

Urmeneta, A., Romero, M., Petre, V., Âveanu, G., Lepage, A., Collin, S., ... Girard, M. (2024). Creative applications of artificial intelligence in education. In Palgrave studies in creativity and culture. https://doi.org/10.1007/978-3-031-55272-4

University of Waterloo. (2025, March 28). Gamification and game-based learning: Centre for teaching excellence. Centre for Teaching Excellence. https://uwaterloo.ca/centre-for-teaching-excellence/catalogs/tip-sheets/gamification-and-game-based-learning

Zhang, S., & Hasim, Z. (2025, August 15). Gamification in EFL/ESL instruction: A systematic review of empirical research. Frontiers in Psychology. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2022.1030790/full