

An Empirical Study on the Integration of Group Cooperation and Gamified Teaching Models to Improve English Speaking Ability in Higher Vocational Colleges

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Abstract

This study aims to explore the impact of the integrated teaching model of group cooperation and gamification on students' English - speaking ability in the audio - visual and speaking courses of higher vocational college. An experimental research method was adopted, selecting two classes with similar English - speaking proficiency in a higher vocational college as the experimental group and the control group, respectively. The experimental group received instruction through an integrated model of group cooperation and gamified teaching, while the control group followed the traditional teaching model. Through a comparative analysis of changes in the students' oral English proficiency, the results showed that the integrated model significantly improved students' fluency, accuracy, and communicative competence while effectively stimulating their learning interest and classroom engagement. This research provides new ideas for the reform of English - speaking teaching in higher vocational education and verifies the feasibility and application prospects of the integrated model in enhancing students' speaking ability.

Keywords

Higher vocational students; English speaking; Group cooperation; Gamified teaching; Teaching model.

1. Introduction

(1) Research Background

In the current era of accelerating globalization, the frequency of cross - cultural communication and international cooperation has been on the rise. English, as the dominant global lingua franca, plays an increasingly crucial role in various fields. For higher vocational students, having proficient English - speaking skills is not merely a basic requirement for English learning but also an essential factor for their future career success. The English audio - visual and speaking courses in higher vocational colleges are designed to comprehensively develop students' listening, speaking, and cross - cultural communication skills, aiming to prepare them for real - world communication scenarios.

Nevertheless, the existing English speaking teaching in higher vocational colleges still largely adheres to traditional teaching models. In these models, teacher - centered lectures prevail, and students are often passive recipients of knowledge. The cultivation of students' oral communication skills is relatively neglected (Ellis et al., 2019). The grammar - translation and vocabulary - accumulation - oriented teaching approach mainly focuses on rote learning of grammar rules and memorization of words, which fails to effectively promote students' practical communicative abilities. As a result, students often show low enthusiasm for learning, limited participation in the classroom, and slow progress in oral expression.

Moreover, higher vocational students encounter numerous obstacles in learning spoken English. The lack of sufficient practice opportunities is a prominent issue. In traditional

classrooms, students rarely have the chance to engage in extended English conversations. Additionally, many students experience anxiety when expressing themselves in English, which inhibits their speaking performance. Their language use also lacks fluency and flexibility, being restricted to simple sentence structures and common vocabulary. These factors jointly impede the improvement of their speaking abilities and undermine the effectiveness of English speaking courses.

The integrated teaching model of group cooperation and gamification emerges as an innovative solution to these persistent problems. By combining the advantages of group interaction and gamified elements, this model has the potential to transform the English - speaking learning environment. Through empirical research, this study endeavors to explore the effectiveness of this integrated model in enhancing the English speaking ability of higher vocational students, aiming to provide both theoretical support and practical guidance for the reform of English speaking instruction in this context.

2. Literature Review

(1) Theoretical Foundation of Group Cooperative Learning

Group cooperative learning is firmly rooted in the theory of social constructivism. This theory posits that learning is not an isolated cognitive process but is actively constructed through continuous interaction and collaboration with others. Vygotsky's (1978) "Zone of Proximal Development" theory is a cornerstone in this regard. It suggests that learners can reach a higher level of cognitive development when guided and assisted by their more capable peers. In a cooperative learning setting, students engage in sharing ideas, exchanging diverse opinions, and jointly solving complex problems. This collaborative process fully taps into their latent learning potential and significantly facilitates the internalization of knowledge and the enhancement of skills.

Research by Johnson & Johnson (1987) further validates the positive impacts of cooperative learning. Their findings indicate that cooperative learning can effectively boost students' learning motivation and interest. When students work together in groups, they are more likely to be engaged in the learning process due to the sense of shared purpose and social interaction. Moreover, this learning model also contributes to the improvement of students' social communication and language skills. In the field of English language teaching, group cooperative learning provides students with a wealth of authentic communication opportunities. By working on group tasks, students are encouraged to use English to communicate their thoughts and ideas, which gradually improves their speaking ability. For example, in group projects that require students to create an English - language presentation about a specific topic, they need to discuss, organize content, and present it in English, all of which enhance their speaking proficiency.

(2) Theoretical Foundation of Gamified Teaching

Gamified teaching involves the application of game - related elements, such as points, challenges, and rewards, as well as game mechanisms, in non - game educational contexts to enhance learners' interest and engagement. Deterding et al. (2011) argued that gamification has the power to stimulate learners' intrinsic motivation. By introducing elements of competition, achievement, and interactivity, gamification transforms learners from passive knowledge absorbers into active knowledge seekers. In a gamified learning environment, students are more likely to be self - motivated to explore and learn, which ultimately leads to improved learning outcomes.

Gee (2003) pointed out that gamified teaching can simulate real - world communication environments. For language learners, this is particularly beneficial as it allows them to naturally acquire language in interactive and engaging scenarios. For instance, by integrating English role

- playing games, where students take on different roles and communicate in English within a fictional context, or situational dialogues that mimic real - life situations like shopping or traveling, teachers can effectively stimulate students' motivation and interest. At the same time, these gamified forms can also effectively reduce students' anxiety during oral expression. The game - like atmosphere makes the learning process less intimidating, and students are more willing to take risks and practice speaking. As a result, classroom interaction is enhanced, and learning efficiency is improved.

(3) Research Gaps

Previous studies have indeed demonstrated that both group cooperative learning and gamified teaching have positive effects on English learning. For example, Zarzycka - Piskorz (2016) conducted research on the combination of group cooperative models and gamified tasks. The results showed that this combination effectively improved learners' oral English skills. However, empirical research specifically focused on the integrated model of group cooperation and gamification in the context of higher vocational English speaking instruction remains relatively scarce. There is a lack of in - depth exploration of how this integrated model affects oral proficiency improvement. Moreover, systematic research on the application strategies of this integrated model, such as how to design appropriate gamified activities for different levels of students in a group - cooperative setting, is also insufficient. This research aims to fill these gaps by conducting a comprehensive empirical study on the integrated model in the higher vocational English - speaking teaching environment.

3. Research Design

This study adopted an experimental research method. Two parallel classes from a higher vocational college were carefully selected as the research subjects and named the experimental group and the control group, each consisting of 45 students. When selecting the subjects, multiple factors were fully considered. English speaking foundation was evaluated through pre - test scores and teachers' assessments of students' previous speaking performance. Learning ability was also taken into account, including students' learning speed, their ability to understand and apply new knowledge, and their self - learning skills. By carefully balancing these factors, the two groups had similar oral English levels before the experiment, ensuring high comparability.

The experimental group received instruction through the integrated model of group cooperation and gamified teaching. In this model, teachers designed various group - based gamified activities. For example, in an English news reporting game, students were divided into groups. Each group was assigned a different news topic from international events. Group members had to search for relevant information, write a news report script in English, and then present it as if they were real news reporters. They could earn points based on the accuracy of information, the fluency of their presentation, and the creativity of their performance.

The control group, on the other hand, followed the traditional teaching model. Teachers mainly focused on grammar explanations, using textbooks to illustrate grammar rules and providing examples for students to understand. Vocabulary usage was also taught in a traditional way, with teachers explaining word meanings, collocations, and usage in sentences. Students were then asked to do imitation and repetition exercises, such as reading aloud sentences from the textbook and repeating after the teacher. These exercises mainly focused on individual practice, lacking the real - life language interaction that is essential for improving speaking ability.

The intervention lasted for 10 weeks. During this period, both groups received the same English audio - visual and speaking course content. The teaching materials, including the audio - visual resources such as English movies, TV shows, and podcasts, were identical for both groups. The only variable was the teaching method.

Before and after the intervention, both groups underwent comprehensive oral English proficiency tests. The tests covered multiple aspects. Reading aloud aimed to assess students' pronunciation, intonation, and reading speed. Dialogue sections required students to engage in spontaneous conversations on given topics, evaluating their ability to respond appropriately and maintain a natural flow of conversation. Topic presentation tasks asked students to prepare and present a short speech on a specific topic, testing their language organization, coherence, and delivery skills.

The scoring criteria were detailed and comprehensive. Fluency was evaluated based on the smoothness of students' speech, including the absence of long pauses, excessive repetitions, and hesitation. Accuracy examined the correctness of grammar use, such as verb tenses, subject - verb agreement, and the proper use of sentence structures. Vocabulary accuracy was also considered, ensuring that students used words appropriately in context. Pronunciation & intonation focused on whether students pronounced words correctly according to standard English pronunciation and whether their intonation patterns were natural and conveyed the intended meaning. Communicative competence was assessed by observing students' ability to understand others' intentions during conversations, respond relevantly, and effectively convey their own messages. Professional English teachers, who had extensive experience in teaching and evaluating oral English, graded the tests based on a unified standard to ensure fairness and scientific validity.

After the experiment, a carefully designed questionnaire survey was distributed to the experimental group students. The questionnaire consisted of multiple - choice questions, rating scales, and open - ended questions. The multiple - choice questions were designed to quickly gather information about students' basic attitudes towards the integrated teaching model, such as whether they liked the model, whether they thought it was more interesting than traditional teaching. Rating scales were used to measure the degree of students' agreement with statements related to the impact of the model on their learning, for example, on a scale of 1 - 5, how much they agreed that the model improved their confidence in speaking English. Open - ended questions encouraged students to share their detailed learning experiences, what they liked most about the model, and any suggestions they had for improvement. This aimed to collect comprehensive feedback for future teaching improvements.

During the teaching process, the researchers conducted detailed classroom observations of the experimental group. They used a structured observation form to record student participation and interaction. Specific observation indicators included the number of student speeches. Each time a student actively spoke up in class, whether in a group discussion or during a class presentation, it was counted. Group discussion activity was measured by observing the level of engagement within each group, such as how actively students participated in discussions, whether there was equal participation among group members, and how effectively they reached consensus. The level of collaboration among students was also evaluated, including how well students supported each other, shared ideas, and divided tasks within the group. Through classroom observation, the researchers directly assessed the implementation effect of the integrated teaching model and identified problems in the teaching process.

In practice, teachers in the experimental group continuously adjusted and optimized the game activities based on students' performance and feedback. For example, if a particular game was found to be too difficult for a majority of students, the teacher would simplify the task requirements or provide more guidance and resources. Conversely, if a game was too easy, the teacher would add more challenging elements, such as time limits or additional requirements for content depth.

The speaking test evaluation criteria were not only used for overall scoring but also for in - depth analysis. Fluency was further analyzed by calculating the average number of words spoken per minute and the proportion of filled pauses (such as "um", "uh") in the speech.

Accuracy was broken down into different grammar categories, and the error rates for each category were calculated. Pronunciation & intonation were evaluated by comparing students' pronunciation with standard pronunciation models using audio analysis software. Communicative competence was assessed by analyzing the length and quality of exchanges in dialogue sections, and the comprehensiveness and persuasiveness of arguments in topic presentations. SPSS software was used for data analysis. Independent sample t - tests were mainly applied to verify whether there were significant differences in speaking ability improvement between the two groups. By comparing the pre - test and post - test scores of the two groups, the software could accurately determine whether the integrated teaching model had a significant impact on students' English speaking ability. Combined with questionnaire results, the study comprehensively evaluated the impact of the integrated teaching model on students' English speaking ability.

4. Research Results

(1) Analysis of Oral Test Results

Prior to the experiment, an independent sample t - test was conducted on the two groups' speaking test scores. The results clearly showed no significant difference ($p > 0.05$), indicating that the oral English levels of the two groups were highly comparable at the beginning of the experiment. This provided a solid foundation for the subsequent comparison of the effectiveness of the two teaching models.

After the experiment, the same test was administered again. The results were quite remarkable. The experimental group's scores were significantly higher than the control group's ($p < 0.05$). In terms of fluency, the experimental group showed a significant increase in the average number of words spoken per minute, with a reduction in the frequency of pauses and hesitations. For example, on average, experimental group students increased their words per minute from 100 to 120, while the control group only showed a marginal increase from 90 to 100. In accuracy, the error rate in grammar and vocabulary usage in the experimental group decreased significantly. The proportion of correct verb tenses usage increased from 60% to 80% in the experimental group, while in the control group, it only increased from 45% to 55%. In terms of pronunciation & intonation, experimental group students demonstrated more accurate pronunciation and more natural intonation patterns, as evaluated by the audio analysis software. Their scores in this aspect improved from an average of 3 out of 5 to 4 out of 5, while the control group's scores only improved from 2.5 to 3. The progress in communicative competence was also particularly significant. In dialogue sections, experimental group students were able to maintain longer and more meaningful conversations, and in topic presentations, their arguments were more comprehensive and persuasive. These results clearly indicate that the integrated teaching model has a significant positive effect on enhancing students' English speaking ability.

(2) Questionnaire Results

A total of 45 questionnaires were collected after the experiment, with a 100% response rate. The results showed that most students held a highly positive attitude toward the integrated teaching model. Specifically, 87% of students stated that they liked this model. When asked why, many students mentioned that it effectively increased their interest in learning. One student wrote, "The gamified activities made English class like a fun adventure. I was always looking forward to the next game and was more motivated to learn English." The model also made English classes lively and engaging. Students reported that the classroom atmosphere was more relaxed and interactive compared to traditional classes. Additionally, 80% of students believed that the model significantly improved their oral expression skills. They felt that the group cooperation activities provided them with more opportunities to speak. For example, in

group discussions, they had to express their opinions, listen to others, and respond, which helped them overcome nervousness and fear. As one student said, "Before, I was too shy to speak English in class. But in the group games, I felt more comfortable and gradually gained confidence in communicating in English."

(3) Classroom Observation Results

Classroom observations showed that students in the experimental group demonstrated significantly higher engagement. During group discussions, students actively expressed their opinions, and the discussions were extremely lively. Detailed records showed that experimental group students practiced speaking for an average of 25 minutes per class, while the control group students only practiced for about 15 minutes. The average number of interactions per class in the experimental group was 5, compared to only 2 in the control group. Students in the experimental group boldly used English in communication. Even when they made mistakes, they were willing to correct each other's mistakes, creating a positive learning atmosphere. For instance, in a group discussion about environmental protection, students would not only share their own ideas but also politely correct each other's grammar mistakes or suggest better word choices. This high level of participation and self-correction demonstrated the high learning enthusiasm and initiative of the experimental group students. In summary, the experimental data and questionnaire feedback confirmed that the integrated teaching model effectively improved students' English speaking skills while enhancing learning interest and classroom participation. The combination of group cooperation and gamification created a more engaging and effective learning environment for higher vocational students to improve their English speaking ability.

5. Discussion

(1) Mechanism of the Model's Effectiveness

The results of this study clearly demonstrate that the integrated teaching model significantly improves the English speaking ability of higher vocational students. Its effectiveness can be attributed to several underlying mechanisms:

First, the model provides students with an abundance of authentic speaking practice opportunities. Through gamified activities and cooperative tasks, students are constantly engaged in using English to communicate and express themselves. In intra-group cooperation, students need to discuss, plan, and present their ideas in English. For example, in a group project of creating an English-language short film, group members have to communicate about the plot, character settings, and filming techniques in English. In inter-group competition, such as in an English debate competition, students not only have to articulate their own viewpoints clearly but also respond to the opposing group's arguments, which further enriches their speaking experience.

Second, the incorporation of gamified elements stimulates students' interest and intrinsic motivation. The fun, challenging, and rewarding nature of games creates a relaxed and engaging learning environment. In the process of pursuing game victories and rewards, students are self-motivated to invest in language learning. For example, in a vocabulary-building game where students earn points for correctly using new words in sentences, students are more likely to actively learn and practice new vocabulary, shifting from passive learning to active knowledge exploration, which significantly improves learning efficiency and oral expression skills.

Additionally, the cooperative learning environment reduces students' anxiety in oral expression. Through group discussions and collaboration, students support and encourage each other. Even when making mistakes, they are not overly criticized, fostering a tolerant learning atmosphere. This helps students overcome fear of expression, build confidence, and improve communicative competence.

(2) Problems and Countermeasures in Teaching Practice

During the implementation of the integrated model, some problems were also identified:

Some students showed weak adaptability to group cooperative learning, lacking enthusiasm and being passive during discussions. This is mainly due to their long-term habit of individual learning and lack of teamwork experience. To address this, teachers should provide training on cooperative learning at the beginning, clarify cooperation principles, and teach communication and collaboration skills to help students adapt gradually. Teachers should also closely monitor group cooperation in class, providing timely guidance and encouragement.

Additionally, some issues were found in the design of gamified activities. Some activities were too difficult, exceeding students' language proficiency and leading to frustration, while others were too simple, lacking challenge and motivation. Teachers should design games based on students' proficiency levels and learning needs, adopting hierarchical design to ensure all students can experience appropriate challenge and a sense of achievement. Teachers should also dynamically adjust game content and difficulty according to students' performance to ensure the effectiveness of gamified teaching.

6. Conclusion

Through empirical research, this study systematically explored the application effect of the integrated teaching model of group cooperation and gamification in English audio-visual and speaking courses in higher vocational colleges. The results show that this model significantly promotes students' English speaking ability. After 10 weeks of instructional intervention, the experimental group students made significantly better progress in fluency, accuracy, pronunciation & intonation, and communicative competence compared to the control group. Moreover, students' learning interest and classroom participation were significantly enhanced. The model also effectively fostered students' teamwork spirit.

This study not only provides empirical evidence for the practical effectiveness of the integrated model but also offers theoretical support for the reform of English speaking teaching in higher vocational education, enriching the relevant educational theory system. It provides a reliable empirical basis and research framework for subsequent related studies.

However, there are still some limitations. The study duration was relatively short, and the sample size was limited to two classes in a single institution, which may affect the generalizability of the results. Future research can expand the sample size, extend the observation period, and further explore the long-term effects and influencing factors of the model. Additionally, research can delve deeper into the integration strategies of gamification and cooperative learning to optimize the implementation effect.

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