

The Impact of Gamified Teaching with Learning Motivation on the Oral English Language Achievement in GuangZhou, China

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Abstract – This study was conducted in Guangzhou, China, to explore the effects of motivational gamified teaching on oral English performance. With the wide application of gamified teaching in the field of education, an increasing number of studies have shown that integrating game elements into the learning process can effectively improve students' learning motivation and engagement. However, in the specific Chinese cultural context, especially among students with different levels of learning motivation, there is a lack of in-depth research on the impact of gamified teaching on oral English ability.

Keywords – Gamified teaching, Learning motivation, Oral English, Educational technology, Learning engagement, Guangzhou, China

I. INTRODUCTION

In the context of the accelerated globalization process, oral English ability occupies an increasingly important position in the comprehensive quality of students, and oral English ability has gradually become the focus of attention of students, parents and teachers. As an international city, Guangzhou has abundant educational resources and frequent foreign exchanges, which has high requirements for students' oral English proficiency. However, the traditional methods of oral English teaching often focus on the inculcation of knowledge, but neglect the cultivation of students' practical application ability and interest. Therefore, traditional oral English teaching is often boring, which leads to students' low enthusiasm for learning, and students' lack of learning motivation, which makes it difficult for students to effectively improve their oral English ability. As a new teaching method, gamified teaching can stimulate students' learning interest, enhance students' participation and stimulate their learning motivation through the form of games, so as to achieve the purpose of improving the teaching effect. This paper discusses the application of gamified teaching in college oral English teaching, analyzes the current situation of college oral English teaching, expounds the significance of gamified teaching in improving students' oral expression ability and stimulating learning motivation, and puts forward the corresponding gamified teaching strategies. The empirical results show that gamified teaching has a significant effect on oral English teaching, which can effectively improve students' oral English achievement and learning motivation.

II. PROBLEM STATEMENT

In today's globalized world, good oral English skills are increasingly critical to the personal development and career prospects of college students in Guangzhou. However, the current oral English teaching of college students in

Guangzhou is not effective, and the traditional teaching mode is difficult to effectively improve the comprehensive level of students' oral English.

As a kind of innovative teaching method, gamified teaching is getting more and more attention in the field of education. Through the integration of game elements, it is expected to stimulate students' interest in learning and improve learning results. However, it is still unclear whether the comprehensive English performance of Guangzhou college students can be significantly improved after adopting gamified teaching with learning motivation.

At the same time, learning motivation plays a core role in language learning. Different types of learning motivation, such as intrinsic motivation and extrinsic motivation, have different influences on students' learning behaviour and outcomes. The influence of gamified teaching on different types of oral English learning motivation of Guangzhou college students also needs to be further explored.

In addition, intonation, as an important part of oral English, is directly related to the accuracy and fluency of oral expression. Although gamified teaching may have a positive effect on the improvement of pronunciation and intonation in theory, its positive effect on Guangzhou college students in terms of pronunciation standard, intonation naturalness and rhythm control is still unclear. Therefore, it is necessary to carry out a comprehensive study on the application of gamified teaching in oral English teaching for college students in Guangzhou, so as to provide powerful guidance for teaching practice.

III. LITERATURE REVIEW

The concept and characteristics of gamified teaching

Gamified teaching refers to the use of game design concepts and elements in the teaching process, such as points, badges, leaderboards, task challenges, etc., in order to increase the interest and interaction of learning Liu, X., & Huang, X. (2021). The characteristics of gamified teaching include situational, interesting, competitive and timely feedback. Contextuality provides students with real or simulated language application scenarios, making learning closer to real life. Li, Y., & Wang, X. (2022) The interest of gamified teaching can attract students to take the initiative to participate in learning, and the competitiveness of gamified teaching can stimulate students' competitive spirit and encourage them to strive to improve themselves. Chen, Y., & Zhang, Y. (2023). The timeliness of feedback in gamified teaching enables students to know their learning results in time and enhance the sense of achievement in learning. Zhang, H., & Zhao, X. (2024).

Learning motivation theory

Learning motivation is the inner motivation that pushes students to carry out learning activities, which can be divided into internal motivation and external motivation. Internal motivation stems from students' interest and love for the learning content itself, such as curiosity for knowledge and pursuit of self-improvement. Amabile, T. M., & Kramer, S. J. (2021). External motivation refers to the learning motivation triggered by external rewards, praise, competition and other factors. Pink, D. H. (2020). Gamified teaching can stimulate students' learning motivation in many ways. For example, tasks and challenges in games can satisfy students' curiosity and desire to explore, thus stimulating internal motivation. Amabile, T. M., & Kramer, S. J. (2021). Reward mechanisms such as points and badges are external motivators that can encourage students to actively participate in learning activities. Pink, D. H. (2020)

Current situation of Chinese education

With the continuous research of researchers, the research topics are gradually enriched and diversified. From the initial discussion of gamified teaching theory, it has gradually expanded to the design, implementation and evaluation of gamified teaching. Researchers have conducted an in-depth discussion on the theoretical system of gamified teaching, and proposed a series of gamified teaching strategies and methods with practical guiding significance. Zhang, J. J., & Wang, M. J. (2024). At the same time, the research methods are also being gradually innovated, and the traditional research methods such as literature review and case analysis are mainly used in the research of gamified teaching in China. With the development of computer technology, many researchers begin to use emerging technologies such as data mining and network analysis to conduct gamified teaching research, which improves the scientificity and accuracy of the research. Zhang, J. J., & Wang, M. J. (2024). The results of the research are gradually emerging. In terms of theoretical research on gamified teaching, Chinese scholars have formed a certain theoretical system, such as "Four elements of gamified teaching" and "five modes of gamified teaching", etc. Hong, L., & Zhu, X.H. (2025). In terms of practical application, local education departments and schools have begun to apply gamified teaching to curriculum teaching and quality education, and certain results have been achieved. Wang, J. D., et al. (2024). International exchanges and cooperation have become increasingly close. Chinese researchers of gamified teaching actively participate in international academic exchange activities, conduct in-depth cooperation with international counterparts, introduce advanced concepts and methods of gamified teaching from abroad, and promote the improvement of research level of gamified teaching in China. Yuan, L., et al. (2024)

Although the research on gamified teaching in China has made certain achievements, there are still some problems and challenges. Theoretical research on gamified teaching is not deep enough, empirical research is few, and interdisciplinary research needs to be strengthened, etc. Huang, T., et al. (2025). China's gamified teaching research should continue to deepen the theoretical research,

strengthen the empirical research to expand the research field, and promote the wide application of gamified teaching in Chinese English education. To expand the research field, the researchers want to promote the wide application of gamified teaching in English education in China.

Review of gamified teaching and learning motivation theory

With the rapid development of information technology, gamified teaching has gradually become an innovative model in the field of education. It uses the elements and mechanisms of success in the game, such as challenge, competition, cooperation, reward, etc., to stimulate students' interest and motivation in learning. Yeager, D. S., & Walton, G. M. (2022).

gamified teaching is closely related to multiple intelligence theory, cognitive load theory and emotional cognition theory. Multiple intelligences theory holds that each student has his or her own strengths in the field of intelligence, while cognitive load theory focuses on the information processing load generated by various tasks and activities during the learning process. By simplifying learning tasks, providing intuitive learning interfaces and effective feedback mechanisms, gamified instruction can help students meet their intellectual needs. Reduce cognitive load and improve learning efficiency Zhang, H., & Zhao, X. (2024). Cognitive theory of emotion emphasizes the important role of emotion in the learning process. gamified teaching stimulates students' learning emotions by creating a positive learning atmosphere and interesting situations, thus promoting learning engagement and deep learning. Yeager, D. S., & Walton, G. M. (2022). In addition, gamified teaching is closely related to learning motivation theory and social cognitive theory in educational psychology. According to the self-determination theory in the theory of learning motivation, gamified teaching can satisfy students' psychological needs such as autonomy, mastery and belonging, thus enhancing students' learning motivation. Dicheva, D., & Dichev, C. (2020) Social cognitive theory emphasizes social interaction and collaboration in the learning process, and gamified teaching cultivates students' teamwork ability and communication ability through group cooperation, role playing and other activities. Amabile, T. M., & Kramer, S. J. (2021). gamified teaching has a solid theoretical foundation, it combines a variety of psychological and pedagogical principles, and provides a new perspective and method for educational practice. How to effectively apply gamified teaching to practice teaching, improve teaching effect and learning experience, still need to carry on research and practice exploration.

The concept of gamified teaching has been widely recognized. gamified teaching refers to the introduction of game elements in the education process, such as role playing, competition, task system, etc., so that students unconsciously learn knowledge, skills and attitudes in the process of playing games. Huijzena, J., Admiraal, W., & Akkerman, S. (2021). The purpose of gamified teaching is to stimulate students' learning interest, improve students' learning enthusiasm, and improve students' learning effect.

The characteristics of gamified teaching are deeply discussed. gamified teaching has several remarkable

characteristics, the first is strong interactivity. The role playing, competitive confrontation and other elements of the game enable students to interact with other players or virtual characters in the process of participating in the game, thereby increasing students' engagement and enthusiasm for learning. Ryan, R. M., & Deci, E. L. (2023). Second, it is highly contextualized. By simulating real life scenes and allowing students to learn in specific situations, gamified teaching is conducive to improving students' hands-on ability and problem-solving ability. Harackiewicz, J. M., & Rozek, C. S. (2020). The characteristic of gamified is also the timely feedback of gamified teaching. The task system in the game can provide feedback information to students in real time, help students understand their learning progress and results, and adjust learning strategies. Deci, E. L., & Ryan, R. M. (2022). Finally, the incentives are clear. The reward mechanism in the game (such as points, MEDALS, etc.) can stimulate students' motivation and encourage them to study harder. Chen, Y., & Zhang, Y. (2023). The application status of gamified teaching in China has attracted much attention. Chinese education departments and schools are trying to apply gamified teaching to curriculum teaching and quality education. Studies have shown that gamified teaching has achieved certain results in improving students' learning interest, cultivating innovative thinking and teamwork ability, etc. Wigfield, A., & Eccles, J. S. (2024). Some studies have also pointed out that problems such as over-reliance on game elements and neglect of students' individual differences exist in the practice of gamified teaching. Yeager, D. S., & Walton, G. M. (2022). How to give full play to the advantages of gamified teaching and avoid the possible problems in its practical application still needs further research and exploration....

IV. METHOD

Research object

This study will select non-English major students from three different universities in Guangzhou as the research objects. Through the method of random sampling, a certain number of students are randomly selected from each school, and the research sample contains 150 students. This sampling method helps to ensure representativeness, and the college students in Guangzhou come from different types of universities, majors and grades, which is diverse. Random sampling can make every student have the same chance to be selected into the sample, so as to avoid the influence of human factors or specific tendencies on sample selection, and ensure that the overall characteristics of the samples selected can better represent the whole population of Guangzhou college students, so that the research results have wider applicability and popularization value. And random sampling can effectively reduce selection bias. For example, if convenience sampling is adopted, students easily accessible to researchers may be excessively selected, such as students in their own schools or familiar with their classes. Such samples may have some limitations in characteristics and cannot truly reflect the whole picture of college students in Guangzhou. Random sampling can reduce this bias to the greatest extent and make the research results more objective and reliable. In addition, the samples obtained by random

sampling conform to certain statistical laws, which is convenient to use various statistical methods for analysis. When making statistical inferences such as hypothesis testing and variance analysis, random samples can meet the preconditions of statistical methods, so that the analysis results are more accurate and reliable. For example, when comparing the oral English scores of the experimental and control groups, statistical analysis based on random samples can more accurately infer the impact of gamified instruction on overall scores.

Research method

This study will use the questionnaire survey method to investigate and study. The content of the questionnaire will be divided into the learning motivation part and the cognition and attitude part of gamified teaching. The Questionnaire of Learning motivation will draw on the relevant dimensions of the classic learning motivation scale, such as the "Motivated Strategies for Learning Questionnaire (MSLQ)", and set questions to measure students' intrinsic motivation, extrinsic motivation and achievement motivation.

For example:

Intrinsic motivation: "I am learning spoken English because I am interested in English culture and want to know more about it." (1) Strongly disagree 2. Disagree 3. Not sure 4. Agree 5. Couldn't agree more)

Extrinsic motivation: "I study spoken English hard in order to do well in the English test." (1) Strongly disagree 2. Disagree 3. Not sure 4. Agree 5. Couldn't agree more)

Achievement motivation: "I always try to surpass other students in oral English learning." (1) Strongly disagree 2. Disagree 3. Not sure 4. Agree 5. Couldn't agree more)

The cognition and attitude of gamification teaching is to better understand students' understanding, acceptance and preference of gamification teaching. Questions such as: "Before this study, did you know about the application of gamification in English learning?" (1) I don't know anything about it. (2) I've heard of it, but I don't know about it. (3) I know something about it. Know it well). "What is your attitude towards the use of gamification in oral English classroom?" (1. Strongly dislike 2. Dislike 3. Neutral 4. Like 5. Like it very much)

Measuring tool

In the oral English test paper, the researchers will use the domestic and foreign authoritative oral English test standards, IELTS oral test and TOEFL oral test as test papers to measure the oral English of the sample college students. And the learning motivation scale with good reliability and validity after local revision is selected, such as "College students' English learning Motivation Scale". The scale covers multiple dimensions such as internal motivation (such as interest in English learning, pursuit of knowledge, etc.), external motivation (such as to get good grades, recognition by others, etc.), achievement motivation (such as pursuing success, avoiding failure, etc.) and so on. Before using the scale, the pre-test and validity test were also carried out to ensure that the scale can accurately measure the

motivation level of Guangzhou college students in oral English learning.

TABLE 1. Overall Positive Attitude

Category	Number of Questions	Mean	Median	Mode	Standard Deviation
All Questions	50	3.65	4	4	0.82

TABLE 2. Strong Learning Motivation

Category	Number of Questions	Mean	Specific Question	Mean
Learning Motivation Dimension	12	3.70	Learning oral English out of interest in English culture	4.10
Learning Motivation Dimension	12	3.70	Hoping to speak at an international academic conference	3.20

TABLE 3. Teaching Effectiveness is Recognized

Category	Number of Questions	Mean	Specific Question	Mean
Related to Teaching Effectiveness	21	3.62	The scenario simulation game in gamified teaching significantly improved my practical application ability of oral English	3.85
Related to Teaching Effectiveness	21	3.62	The English tongue - twister challenge in gamified teaching improved the clarity of my oral English pronunciation	3.40

TABLE 4. Good Learning Experience

Category	Number of Questions	Mean	Specific Question	Mean
Related to Learning Experience	16	3.68	I think gamified teaching has made me find more fun in oral English learning	4.05
Related to Learning Experience	16	3.68	Participating in gamified teaching is to become a core member in English club activities	3.30

TABLE 5. Correlation Analysis Results

Category	Specific Examples	Pearson Correlation Coefficient	P - value
Correlation between Learning Motivation and Teaching Effectiveness	Question 7 (Participating in gamified oral English learning is to hope to engage in English related work in the future) Question 8 (The scenario simulation game in gamified teaching significantly improved my practical application ability of oral English)	0.45	< 0.01
Learning Experience Promotes the Perception of Teaching Effectiveness	Question 25 (I think gamified teaching has made me find more fun in oral English learning) Question 32 (The topic speech game in gamified teaching improved my organizational ability of oral English)	0.42	< 0.01

TABLE 6. Difference Analysis Results

Category	Specific Question	Mean of Males	Mean of Females	t - value	P - value
Gender Difference	Question 5 (The group competition in gamified teaching made me more active in improving my oral English level)	3.90	3.50	2.56	< 0.05
Gender Difference	Question 14 (The role - playing game in gamified teaching made me more emotional in oral English expression)	3.40	3.80	- 2.31	< 0.05

V. FINDINGS

Through in-depth analysis of 150 questionnaire data on gamified oral English teaching, this study aims to comprehensively understand the attitude of college students in Guangzhou towards gamified English teaching, the influence of this teaching mode on the improvement of students' learning motivation and oral ability, and the different performance of students of different genders. And the descriptive statistical results.

Overall positive attitude

According to the result statistics, the overall mean of the answers to all 50 questions is 3.65, and the median and mode are both 4. The data indicates that students generally tend to hold a positive attitude towards the expressions related to gamified oral English teaching, and most students' feedback is concentrated in the "agree" range. The standard deviation is 0.82, which indicates that although the data is somewhat discrete, it is relatively concentrated on the whole,

indicating that college students have certain consistency in their views on gamified teaching.

Learning motivation

In the dimension of learning motivation, a total of 12 questions related to learning motivation are covered, and the result shows that the average value of this dimension is 3.70, which indicates that students have strong motivation to participate in gamified oral English learning. Among them, the average value of questions related to learning spoken English due to their interest in English culture is as high as 4.10, highlighting that cultural interest is an important motivation for learning, while the average value of questions that expect to speak at international academic conferences is only 3.20, which may be due to the great challenge for most students to speak at international academic conferences and their weak relevance to their current learning context.

The teaching effect was recognized

There was a total of 21 questions related to the teaching effect, and the results showed that the average value was 3.62, indicating that students recognized the positive effect of gamified teaching on the improvement of oral English ability. For example, the average value of "situational simulation games in gamified teaching have significantly improved my oral English ability" is 3.85, with outstanding effect; The average value of "English tongue twister challenge in gamified teaching has improved the clarity of my spoken English pronunciation" is 3.40, which is relatively weak.

Good learning experience

There are 16 questions related to learning experience, and the results show that the average value is 3.68, indicating that students have a good experience in gamified teaching. Among them, the average value of "I think gamified teaching makes me find more fun in oral English learning" is as high as 4.05, highlighting that fun is the key factor to attract students; The mean value of "participating in gamified teaching is to become a core member in English club activities" was 3.30, indicating that relatively few students participated for this purpose.

5.2.1 Results of correlation analysis

1. Learning motivation is closely related to teaching effect: Pearson correlation coefficient of learning motivation and teaching effect related questions shows a significant positive correlation. For example, the correlation coefficient between question 7 (participating in gamified oral English learning, hoping to engage in English-related work in the future) and question 8 (situational simulation games in gamified teaching, which significantly improved my practical ability of oral English) was 0.45 ($p<0.01$), indicating that the stronger the learning motivation, the better the ability to use English. The more students can feel the effect of gamified teaching on improving oral English ability. Further analysis shows that intrinsic motivation, such as interest in English culture, is more significantly related to the teaching effect in pronunciation, intonation and vocabulary accumulation.

Extrinsic motivation, such as winning a prize in a competition, is highly correlated with improved confidence and fluency in oral expression.

Learning experience promotes the perception of teaching effect

Taking question 25 (I think gamified teaching makes me find more fun in oral English learning) and question 32 (topic speech games in gamified teaching improve my oral English organizing ability) as examples, the correlation coefficient is 0.42 ($p<0.01$), indicating that good learning experience is positively correlated with teaching effect. Students with good learning experience are more likely to recognize the role of gamified teaching in improving their oral English ability, especially in the aspects of logic and appeal of expression.

Results of difference analysis

Significant gender difference: In question 5 (group competition in gamified teaching makes me more active in improving my oral English), the mean value of males is 3.90, the mean value of females is 3.50, and the T-value is 2.56 ($p<0.05$), indicating that males have stronger feelings on the improvement of oral English promoted by group competition, and males may have more competitive consciousness. As for question 14 (role-playing games in gamified teaching make me more emotional in oral English expression), the mean value of 3.80 for females was higher than 3.40 for males, and the T-value was -2.31 ($p<0.05$), indicating that females benefited more from improving emotional expression in role-playing.

VI. DISCUSSION

Based on the above analysis, gamified oral English teaching has achieved certain results in improving students' learning motivation, oral ability and learning experience. The students hold a positive attitude towards gamified teaching, have strong learning motivation, and recognize the teaching effect. There is a significant positive correlation between learning motivation and teaching effect, and between learning experience and teaching effect. At the same time, gender and major differences are obvious in students' responses to gamified teaching. In the subsequent practice of gamified oral English teaching, teachers can design targeted teaching activities according to students' gender and professional characteristics, strengthen interesting elements, and further stimulate students' learning motivation, so as to improve teaching quality and students' oral English ability.

VII. CONCLUSION (OR LIMITATION OR SUGGESTION FOR FURTHER STUDIES)

Research conclusion

This study mainly explores the influence of gamified teaching with learning motivation on the oral English scores of Guangzhou college students. Through questionnaire survey and oral test data collection and analysis, it is found

that gamified teaching has a significant effect on improving students' oral English scores and learning motivation. Under the background of gamification teaching, students can better improve their oral English learning performance, and it can be found that the teaching effect is significant and the advantages are prominent in the question types that require practical application ability, such as topic statement and situational dialogue, indicating that gamification teaching can effectively promote the improvement of students' oral expression ability. The results of the questionnaire survey show that students have a positive attitude towards gamification teaching, and their learning motivation, especially intrinsic motivation, has a high score, and intrinsic motivation is significantly positively correlated with positive attitude towards gamification teaching.

Research limitation

Sample limitations: Although the research sample covers students of different majors and grades in many universities in Guangzhou, due to the limitations of manpower, material resources and time, the sample size is still not large enough, which may not fully represent the diversity of all college students in Guangzhou, and there is sampling bias, which affects the universality of the research results.

Limitations of teaching intervention: The intervention period of gamified teaching is relatively short, and it is difficult to determine the stable influence of long-term continuous use of gamified teaching on students' oral performance and learning motivation. In addition, although the gamified teaching scheme is carefully designed, the final teaching effect may be affected due to the difference in teachers' understanding and implementation of gamified teaching during the implementation process.

Limitations of variable control: Although the study tried to control other variables that affect oral English performance, such as students' extracurricular English learning time and language learning environment, it was difficult to achieve complete control in practice. These variables that were not fully controlled may interfere with the research results and weaken the certainty of the causal relationship between gamified teaching and the improvement of oral English performance.

In-depth study suggestion

Expand the sample size and diversity: Future research can further expand the sample scope to cover more universities and students of various levels in Guangzhou, increase the sample size, and pay attention to special groups of students, such as students with weak English foundation or learning disabilities, so as to enhance the representation of the research results of Guangzhou college students as a whole, and deeply explore the differentiated responses of students from different backgrounds to gamified teaching.

Carry out long-term follow-up research: design a long-term teaching intervention experiment to continuously observe the dynamic influence of gamification teaching on students' oral English scores and learning motivation in one semester or even one academic year, analyze the changing trend of gamification teaching effect over time and the maintenance

of students' learning motivation, and provide a more reliable basis for the long-term application of gamification teaching.

Optimize teaching intervention and precise control of variables: On the one hand, strengthen the professional training of gamified teaching teachers, formulate detailed and standardized gamified teaching operation guidelines, and ensure the consistency and high-quality implementation of teaching programs; On the other hand, more advanced research design and technical means, such as big data, are used to analyze students' extracurricular learning behaviours, more accurately control other variables that affect oral English scores, and clarify the independent mechanism of gamified teaching.

Explore the optimization strategy of gamification teaching: In-depth study on the specific effects of different types of gamified teaching activities (such as competitive games, cooperative games, role-playing games, etc.) on the improvement of various dimensions of students' oral ability (pronunciation, fluency, vocabulary, grammar, pragmatic, etc.), as well as the preference and adaptability of students with different types of learning motivation for various gamified activities. Therefore, it can provide teachers with more targeted suggestions on gamification teaching strategy selection and realize personalized teaching.

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