



## The Effect of Game-Based Learning on Improving the Basic English Speaking and Listening Ability of Children Aged 5-6 at Golden Cradle Kindergarten in High-Tech Zone of Nanchang, Jiangxi

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### Abstract

**Background and Aims:** English language proficiency is increasingly becoming a vital skill in today's globalized world. As countries strive to enhance their competitiveness on the international stage, the ability to communicate effectively in English has become a critical aspect of education, particularly during early childhood development. Early exposure to English language learning has been shown to yield significant benefits, leading to increased linguistic abilities and intercultural understanding. Consequently, the implementation of effective language learning strategies during early childhood education becomes paramount. The purposes of this study were: 1) to compare the basic English listening ability of children aged 5–6 after using game-based learning activities to that before learning, 2) to compare the basic English-speaking ability of children aged 5–6 after using the game-based learning activities with that before learning. And 3) to study the children's interest in the game-based learning activities.

**Methodology:** The study, conducted at Golden Cradle Kindergarten in Nanchang City, evaluated the impact of a game-based teaching method on the English listening and speaking skills of 35 children aged 5-6 over one month. Initial and final assessments recorded in Excel showed significant improvements in both skills and increased learning interest. The data analysis includes percentages, means, standard deviation, and paired t-tests.

**Results:** Results showed that the English listening ability of students was significantly higher than before they learned, indicating that the game teaching method can improve the English listening ability of children aged 5–6 years old, students had English-speaking ability was significantly higher than before they learned, indicating that the game teaching method can improve the English-speaking ability of 5–6-year-old children and the learning interest of students was significantly higher than before they learned.

**Conclude:** Children between the ages of five and six have demonstrated a significant improvement in their English listening skills after using the game teaching method; their ability was significantly better than before. Additionally, it improves their ability to speak English, with a discernible increase observed following the application of the game-based learning approach. Additionally, this approach makes the kids more engaged and motivated than they were before by piquing their curiosity in learning.

**Keywords:** Game-Based Learning; Young Children; English Speaking and Listening Ability

### Introduction

In the contemporary globalized landscape, proficiency in the English language has become a fundamental skill, particularly in light of the increasing global competition. This proficiency is crucial for effective communication, starting from early childhood education. Studies have demonstrated that early exposure to English language learning significantly enhances linguistic skills and fosters intercultural comprehension. Therefore, the development of effective language learning strategies during early childhood is imperative.

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Within China, the surge in English language education is driven by the country's expanding economic presence and international engagement in trade and cultural affairs. It is vital for Chinese students, especially young learners, to be proficient in English, necessitating the integration of innovative and engaging teaching methodologies. Game-based learning, which utilizes children's natural affinity for play to improve learning outcomes, is a notable approach in this context.

The Golden Cradle Kindergarten, located in Nanchang City's High-tech Zone, is spread over 3000 square meters and offers a sophisticated and expansive educational environment. The philosophy of the kindergarten centers on holistic development, emphasizing physical and mental well-being, habit formation, personality nurturing, and intellectual and physical growth. The institution is renowned for its exceptional facilities and educational standards.

At the ages of 5 and 6, children are at a crucial stage of language development, characterized by rapid cognitive growth and a keen interest in new concepts. Implementing game-based learning in their language curriculum could leverage these traits to create a stimulating and enjoyable learning environment conducive to language acquisition.

Game-based learning is effective in language acquisition for several reasons. It offers an engaging platform for active participation, aligns with constructivist learning theory, and caters to the natural learning inclinations of children. Before exposure to game-based learning, children's English speaking and listening abilities can vary, with some possessing basic vocabulary and sentence construction skills, while others may have more rudimentary language skills.

Despite the recognition of game-based learning's benefits in various educational contexts, its specific impact on English language development among Chinese kindergarten children is under-researched. This study aims to fill this gap by evaluating the effectiveness of game-based learning in a Chinese kindergarten setting, focusing on speaking and listening skills improvement. Concurred, advocating for games as a valuable method to practice language. This is attributed to games providing practical language templates for real-life actions, with game-based teaching extending beyond the mere integration of games into instructional methods. Emphasized the arduous nature of language learning, particularly for English. Acknowledging the prolonged and repetitive process required, Erson highlighted that game-based teaching can simplify the learning process and make the practice of knowledge more engaging.

Therefore, the meticulous design of classroom settings and the selection of appropriate language-teaching games is critical. In summary, educators specializing in foreign language instruction generally advocate for the incorporation of games into English teaching. During the learning process, games have been found to facilitate second language acquisition and enhance students' study interest. Suggested that interest plays a pivotal role in achieving mathematical learning outcomes and can alleviate fear associated with mathematics. (Renninger, 2000) observed that individual interests tend to be enduring. Identified four dimensions of learning interest in mathematics: interest in a specific domain, interest in particular subjects or topics within a domain, interest in specific contexts embedded in topics, and interest in certain activities linked to these contexts/topics. (Frenzel, 1992) related conceptual interest constructs to values and enjoyment, while indicating that interest is directly influenced by motivation and confidence, with an indirect impact from anxiety and perceived usefulness. Noted that high interest in a subject correlates with favorable learning outcomes. Furthermore, students with learning interests exhibit greater academic effort better organization of learning (Hsu et al, 2014), and increased focus, involvement, intensity, concentration, and perseverance in learning activities.



In Indonesia, extensive research has been conducted exploring the relationship between students' learning interests and mathematical achievement. Studies by various researchers have indicated a correlation between these two factors.

However, these findings necessitate validation through meta-analysis, a statistical technique that consolidates findings from multiple similar studies. This method allows for a more comprehensive summary and explanation of specific phenomena (Green and Kreuter, 2005) and includes thorough literature analysis using appropriate statistical techniques. The benefits of meta-analysis include the quantitative amalgamation of diverse research, establishing links between studies, objectivity, focus on effect size, and simplicity of execution (King & He, 2006). It also enables detailed reporting of aggregate data, mitigates publication bias, and allows for more selective reporting of research.

Moreover, statistical meta-analysis techniques provide a summary of evidence for decision-makers, reducing the time required to review a variety of primary evidence (Green, 2005), while limiting bias and offering critical appraisals and conclusions from specific studies. Although many studies have linked interest and learning achievement none have explicitly examined its impact on learning mathematics, necessitating further research in this area. In summary, this research contributes to understanding the impact of game-based learning on the enhancement of English speaking and listening skills in children aged 5-6. By conducting a thorough case study at the Golden Cradle Kindergarten, the research aims to illuminate the potential advantages of incorporating game-based learning in early English language education in China, offering significant insights for educators, policymakers, and curriculum developers.

## Research results

1: To compare the basic English listening ability of children aged 5-6 after using the game-based learning activities higher than before learning.

2: To compare the basic English-speaking ability of children aged 5-6 after using the game-based learning activities higher than before learning.

3: To study the children's interest in the game-based learning activities.

## Scope of Study

### 1. Population and Sample

*Population:* this thesis studies the basic English listening and speaking ability of children aged 5-6 years old, and the paper selects the Golden Cradle Kindergarten in High-tech, Nanchang as the study area, so all the 5-6 years old kindergarten children in the Golden Cradle are used as the population.  
*Sample:* In this thesis, a class of 5–6-year-olds was selected as the study sample, one class of 35 students.

2. The variables studied in the research

2.1 Independent Variables: Game-based learning approach

2.2. Dependent Variables: Study interest, basic English listening and speaking ability.

3. Research area: This research will implicate the Golden Cradle Kindergarten in the High-Tech Zone of Nanchang, Jiangxi.

4. Research Period: The research period is one month.

## Literature Review

Squire, (2005) Skills relevant to the 21st century are dramatically different from skills the



educational system currently values. The 21st-century learning and innovative skill set is defined as critical thinking, creativity, collaboration, and communication.

Binkley, et al (2012) Critical thinking skills include scientific reasoning, systems thinking, computational thinking, decision-making, and problem-solving. Creativity includes divergent thinking, innovative thinking, originality, inventiveness, and the ability to view failure as an opportunity to improve. Collaboration pertains to the ability to work effectively and respectfully with diverse teams, exercise flexibility, and willingness to make compromises to accomplish goals, and assume shared responsibility. Communication refers to the ability to articulate thoughts and ideas in a variety of forms, communicate for a range of purposes and in diverse environments, and use multiple media and technologies. Traditional educational practices often hinder creativity by emphasizing only one correct answer, imposing high-stakes failure, and favoring conformity and standardization.

Plucker and Makel, (2010). Additionally, 21st-century skills are difficult to evaluate using traditional assessment practices such as the popular standardized testing Games, on the other hand, necessitate the development of 21st-century skills which are valued in the new digital economy

Gee, (2008) Provides a means of assessing these hard to evaluate skills, Specifically, effective learning is situated, active, and problem-based and requires immediate feedback. Well-designed educational games such as Quest Atlantis and The Radix Endeavor provide complex holistic problem-based environments that can support active and situated learning, require authentic collaboration, and offer challenge and immediate feedback. Very little is known as to what degree of design complexity is required for meaningful learning to occur. Many educational games are simple designs that are narrowly focused on academic content, target low-level literacy, provide drill and practice methods similar to worksheets, and stress memorization of facts

## Methodology

Initially, a research framework was established through literature analysis, followed by hypothesis validation via data analysis. This investigation focused on the basic English listening and speaking skills of children aged 5-6 years, selecting the Golden Cradle Kindergarten in the High-tech Zone of Nanchang City as the research site. Consequently, the entire population of 5-6-year-old children attending this kindergarten was included in the study.

The research encompassed a single parallel class at the Golden Cradle Kindergarten, consisting of 35 third-grade students. The study was conducted over one month and involved several distinct phases. Before implementing the game-based teaching methodology, an observational assessment of basic English listening and speaking skills was conducted, with the data being systematically recorded in Excel. This initial phase aimed to document the baseline English speaking, listening abilities, and study interest scores of the students.

The application of games in teaching was strategically designed, not to dominate entire 30-minute lessons, but to effectively integrate games into various teaching stages. The objective was to engage students' interest, enhance learning efficiency, and facilitate enjoyable learning experiences. It was crucial to understand the role of games at each teaching stage, including transitioning students from other activities or recess into a learning state, adjusting the classroom atmosphere, reinforcing previous knowledge, and stimulating interest in new topics. During the introduction of new content, games were employed to facilitate comprehension through visual and textual elements, ensuring that game complexity was appropriately balanced with the students' nascent familiarity with new material. During the consolidation phase, approximately 20 minutes into the class, games served to alleviate fatigue and



reinforce new knowledge in a relaxed setting. In the final expansion stage, games were utilized to assist students in summarizing and applying the lesson's content.

In the concluding phase, after a month of the teaching experiment, another observational assessment was conducted on the basic English listening and speaking skills of the students in both classes, with data again recorded in Excel. This phase aimed to document the changes in English speaking and listening abilities of the students.

To address the research hypothesis, data collection was achieved through observational methods, involving the teacher's assessment of the classroom performance of 5-6-year-old children. Scoring was based on a predetermined observation form, thus yielding experimental data. In the data analysis phase, the mean and standard deviation of the children's performance across different periods were compared to determine the acceptance or rejection of the experimental hypothesis.

## Result

The experimental dataset comprises the scores of 35 students across three evaluative metrics: English listening ability, English speaking ability, and learning interest. These scores were recorded at five distinct time points: before the commencement of initial instruction, following one week of the second English instruction, after two weeks of the third English instruction, after three weeks of the fourth English instruction, and finally, after four weeks of the fifth English instruction.

Table 1 Research Data Analysis

Times	listening		speaking		interest	
	Mean	SD	Mean	SD	Mean	SD
1	26.47	3.30	22.11	3.62	31.17	4.39
2	28.78	2.91	32.97	3.29	33.00	3.55
3	31.14	2.58	35.00	5.35	34.89	3.68
4	33.11	3.58	35.94	4.47	35.89	3.68
5	38.83	3.52	39.86	3.09	37.81	4.00

For English listening ability, the mean score of the 35 students exhibited a notable increase, rising from 26.47 points before the initial instruction to 38.83 points by the end of the four weeks of the fifth instruction session, marking an elevation of 12.56 points. Concurrently, the standard deviation for English listening ability demonstrated a marginal reduction, decreasing from 3.30 points at the onset of the first instruction to 3.52 points after the fifth four-week instruction period, a decrement of 0.22 points.

Regarding English speaking ability, there was a substantial increase in the mean score of the students. It ascended from 22.11 points before the first instruction to 39.86 points after the fourth week of the fifth instruction session, an increment of 17.75 points. In parallel, the standard deviation for English speaking proficiency among these 35 students showed a decrease, moving from 3.62 points at the beginning of the first instruction to 3.09 points at the end of the fifth four-week teaching period, reflecting a decrease of 0.53 points.

In terms of learning interest within the experimental group, there was an upward trajectory observed in the mean value, which augmented from 31.17 points before the first instruction to 37.81 points at the termination of the fifth four-week English instruction, an increase of 6.64 points. The standard deviation for the group's interest in learning also showed a decline, falling from 4.39 points at





the initiation of the first instruction to 4.00 points after the fifth four-week English instruction period, a decrease of 0.39 points.

## Discussion

This investigation sought to assess the impact of game-based pedagogical approaches on the basic English listening skills and learning enthusiasm of children aged 5-6 years. It posited that employing game-based teaching methodologies might enhance the children's abilities in English listening and speaking, as well as their enthusiasm for learning. The research methodology encompassed an observational approach to gather data, with 35 students receiving instruction in basic English listening and speaking skills through game-based methods. These students' listening and learning competencies were monitored and evaluated weekly using an observational scale, which rated their abilities in basic English listening, and speaking, and their learning interests. The findings indicated improvements in listening, speaking, and learning enthusiasm under game-based instruction, thereby validating Hypotheses H1, H2, and H3.

The study revealed a significant enhancement in the English listening abilities of the 35 participants post-intervention, corroborating the first hypothesis. This improvement could be attributed to the game-based methodology providing increased exposure to English auditory input and immersing children in a wide array of English words, sentences, and contexts during gameplay. This exposure likely bolstered their comprehension and memorization skills in English. Additionally, the approach offered frequent feedback, enhancing children's confidence and motivation in English listening.

Similarly, the research demonstrated a notable increase in the English-speaking abilities of the children, supporting the second hypothesis. This improvement is likely a result of the game-based method facilitating more extensive English verbal output and allowing children to utilize a broader range of English vocabulary and expressions during gameplay, thereby enhancing their oral expression and practical application skills. Moreover, the method fostered spoken English interactions, thus improving their communication and collaborative abilities. According to several studies. Some scholars also mention that game-based learning can improve students' English speaking and listening abilities. Game-based learning can be an effective means of harmonizing teachers' and students' preferences, contributing to improving students' engagement, coordination, and creativity.

Furthermore, the study observed a significant rise in the student's interest in learning, affirming the third hypothesis. This increased interest could stem from the enjoyable nature of the game-based approach, which likely imparted a sense of joy and satisfaction in learning, subsequently enhancing their engagement and enjoyment in English learning. The method also presented learning challenges, encouraging exploration and creativity in their English language journey.

From a practical standpoint in early childhood education, these findings offer novel insights and methodologies for English language instruction among young learners. The game-based approach can be tailored to align with children's developmental stages and learning needs, creating suitable game activities that enable learning through play. The result is the same as the (Liang,2004)'s result.

Theoretically, these results provide empirical support for game pedagogy research, a teaching philosophy rooted in constructivism and contextualism. This study empirically validates the game pedagogy's effectiveness in enhancing English listening and speaking skills and learning interest in children aged 5-6, thereby affirming its theoretical underpinnings and principles. Researchers in game-based teaching methodologies can use these findings to deepen theoretical analyses and expand research scopes, fostering theoretical innovations and improvements in game-based teaching methods.



Finally, in the realm of children's English learning development, this study offers fresh insights and recommendations. Given the pivotal role of English learning in children's overall development, finding effective, enjoyable, and sustainable methods is crucial. The results suggest that the game-based teaching approach can be an efficacious solution, aiding in the improvement of English listening and speaking skills and fostering love and self-confidence in English learning among children.

### Limitations

The small sample size, with only 35 children participating in the experiment, may result in the results being less generalizable and not representative of all 5-6-year-olds. The results of the experiment may change if the sample size is increased.

The experimental period was short, only one month, which may lead to lower stability of the experimental results and not reflect the long-term English learning effect on children. The experimental results may change if the trial period is extended.

Other factors that may affect children's English learning, such as children's personality, intelligence, family background, social environment, etc., were not considered, and these factors may interact or interfere with the game teaching method, affecting the accuracy and validity of the experimental results. If these interfering variables are controlled and excluded, the experimental results may change.

### Recommendation

Based on the observed improvements, the following recommendations are made:

**Adopt Game-Based Teaching Methods:** The substantial improvement in English listening comprehension (mean score increasing from 26.47 to 38.83 points) indicates the great efficacy of game-based teaching techniques. Expanding the use of these techniques could improve young students' listening abilities.

**Integrate Games to Improve Speaking Skills:** The significant increase in English speaking proficiency (mean score rising from 22.11 to 39.86 points) suggests that games are an effective way to improve speaking ability. To promote improved speaking abilities, curricula in schools ought to include games.

**Use Games to Enhance Learning Interest:** The increase in learning interest (mean value rising from 31.17 to 37.81 points) demonstrates how engaging game-based learning techniques are. Games can help teachers keep and grow their students' interest in the material, making learning more pleasurable and productive.

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