# BỘ GIÁO DỤC VÀ ĐÀO TẠO TRƯỜNG ĐẠI HỌC QUẢN LÝ VÀ CÔNG NGHỆ HẢI PHÒNG



# KHÓA LUẬN TỐT NGHIỆP

NGÀNH: NGÔN NGỮ ANH – NHẬT

Sinh viên: Phạm Thị Phương ThảoGiảng viên hướng dẫn : Th.s Nguyễn Thị Thu Huyền

HẢI PHÒNG – 2024

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# A RESEARCH ON APPLYING GAMES TO MOTIVE ENGLISH STUDY FOR STUDENTS AT CHU VAN AN SECONDARY SCHOOL IN HAI PHONG

# KHÓA LUẬN TỐT NGHIỆP ĐẠI HỌC HỆ CHÍNH QUY NGÀNH: NGÔN NGỮ ANH – NHẬT

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**Tên đề tài**: A research on applying games to motive English study for students at Chu Van An secondary school in Hai Phong

# NHIỆM VỤ ĐỀ TÀI

1. Nội dung và các yêu cầu cần giải quyết trong nhiệm vụ đề tài tốt nghiệp

2. Các tài liệu, số liệu cần thiết

3. Địa điểm thực tập tốt nghiệp

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## CÁN BỘ HƯỚNG DẪN ĐỀ TÀI TỐT NGHIỆP

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**Nội dung hướng dẫn**: A research on applying games to motive english study for students at Chu Van An secondary school in Hai Phong

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Hải Phòng, ngày 20 tháng 09 năm 2024 XÁC NHẬN CỦA KHOA

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2. Đánh giá chất lượng của đồ án/khoá luận (so với nội dung yêu cầu đã đề ra trong nhiệm vụ ĐTTN trên các mặt lý luận, thực tiễn, tính toán số liệu...)

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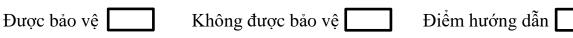
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1.	Phần nhận xét của g	giáo viên chấm phản biện
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### Giảng viên chấm phản biện

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# ABSTRACT

In recent years, the use of games in educational settings has gained increasing attention as a method to enhance student motivation and engagement. Motivating students to actively engage in language learning remains a significant challenge in secondary education, particularly in subjects like English. This research investigates the application of gamebased learning to enhance motivation and improve English language skills among students at Chu Van An Secondary School in Hai Phong. By leveraging the interactive and enjoyable nature of games, this study aims to create a more dynamic learning environment that fosters student interest and participation, ultimately leading to better academic outcomes and a more positive attitude toward learning English.

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# **PART I: INTRODUCTION**

#### 1. Rationale of the study

The acquisition of English language skills is becoming increasingly crucial in a world that values global communication and cross-cultural understanding. In Vietnam, proficiency in English is not only a requirement for academic success but also a key skill in pursuing higher education and career opportunities, both locally and internationally (Nguyen, 2020). Despite this recognition, many students, particularly at Chu Van An Secondary School in Hai Phong, continue to struggle with maintaining motivation in their English studies. One of the primary reasons is the reliance on traditional teaching methods, which often emphasize rote memorization, grammar drills, and textbook learning. These methods can lead to disengagement and a lack of meaningful interaction with the language, resulting in poor learning outcomes (Dörnyei, 2001).

A report by the British Council (2018) found that Vietnamese students often view English as a difficult subject, primarily due to the lack of engaging learning activities and opportunities to practice real-life communication. This disengagement has serious implications for student motivation, which is a key driver of success in language learning. According to Dörnyei and Ushioda (2011), motivation is one of the most significant factors influencing the ability to learn a second language, affecting the intensity of learning, willingness to take risks, and persistence in overcoming language barriers.

To address these challenges, educators are increasingly turning to innovative teaching methods, such as game-based learning, which have been shown to boost student motivation and engagement. Educational games provide an interactive environment that encourages active participation, fosters collaboration, and allows students to learn through play. Studies have demonstrated that games can enhance students' intrinsic motivation by creating a sense of fun and achievement (Hamari et al., 2014). Furthermore, games offer immediate feedback, which is crucial for language acquisition, as it helps learners identify areas of improvement and encourages repeated practice in a non-threatening way (Anderson & Ritchie, 2018).

Research has also shown that game-based learning can improve specific language skills, such as vocabulary acquisition and speaking fluency. For example, a study conducted by Peterson (2010) found that students who participated in language learning games showed significant improvements in vocabulary retention and communication skills compared to those who followed traditional instruction. Similarly, Gee (2003) highlights that games can create authentic language environments where students practice problem-solving, critical thinking, and real-life communication, all essential components of language learning.

In light of these findings, this study aims to explore the impact of game-based learning on the motivation and language proficiency of students at Chu Van An Secondary School. By integrating games into the English curriculum, the research seeks to understand how this approach can transform the learning experience, making it more engaging, interactive, and effective for students. The study will also investigate how game-based learning can foster a positive attitude toward English, helping students overcome the fear and anxiety often associated with language learning.

Through this research, hope to contribute to the growing body of literature on game-based learning in Vietnam and provide practical recommendations for educators seeking to enhance student motivation and improve English language teaching outcomes. By examining both the challenges and potential benefits of applying games in the classroom, this study aims to offer insights into how innovative teaching methods can be effectively implemented in the local educational context.

#### 2. Aims of the study

The aim of this study is to assess the effectiveness of game-based learning in improving both student motivation and English language proficiency at Chu Van An Secondary School. Specifically, it seeks to evaluate how games can enhance engagement, improve key language skills (such as vocabulary, listening, reading, and speaking), and provide practical recommendations for integrating games into English teaching practices.

#### 3. Research questions

The study aims to address the following research questions regarding the application of game-based learning to motivate English study among students at Chu Van An Secondary School:

1. How does game-based learning affect the motivation of students in learning English?

2. What is the impact of game-based learning on students' English language skills?

3. What are the students' and teachers' perceptions of the effectiveness of gamebased learning in the classroom?

#### 4. Methods of the study

The study will use both quantitative and qualitative methods. Data will be collected through pre- and post-intervention questionnaires, English proficiency tests, and semi-structured interviews with students and teachers at Chu Van An Secondary School. Educational games will be integrated into English lessons over several weeks. Changes in student motivation and language skills will be assessed through statistical analysis of test results and questionnaires, while interview data will provide qualitative insights into the effectiveness of game-based learning.

#### 5. Scope of the study

The study focuses on applying game-based learning to enhance English language proficiency among students in grades 6 to 9 at Chu Van An Secondary School in Hai Phong, Vietnam. It will explore various educational games, including digital and board games, integrated into the English curriculum. Key language skills assessed will include vocabulary acquisition, reading comprehension, listening, and speaking. The intervention will last several weeks, and the study acknowledges limitations such as sample size and variability in students' initial proficiency levels. Overall, the aim is to understand how game-based learning can improve motivation and language skills among students.

#### 6. Significance of the study

This study explores the use of game-based learning to enhance student motivation and improve English language skills. It offers innovative teaching methods that make learning more engaging and effective. The research provides practical insights for teachers, helping them adopt game-based strategies to boost student participation and proficiency. Additionally, the study contributes to educational research by providing empirical evidence on the benefits of integrating games into language education.

#### 7. Organization of the study

PART 1: INTRODUCTION

Introduces the research topic, rationale, aims, scope, and significance, along with key research questions.

PART II: DEVELOPMENT - the main part of this study which is divided

into four chapters:

Chapter 1: Literature review - Reviews theories and research on game-based learning, including concepts, history, types, motivation, and impact on language skills.

Chapter 2: Methology - Outlines the research design, participants, and data collection and analysis methods.

Chapter 3: Findings and discussion - Analyzes findings in relation to existing research and their educational implications.

PART 3: CONCLUSION

Analyzes findings in relation to existing research and their educational implications.

# PART II. DEVELOPMENT

# **Chapter 1. Literature review**

#### **1. Game-Based Learning: Concepts and Theories**

#### **1.1. Definition of Game-Based Learning**

Many parents believe that exposing children to video games is detrimental to their development. However, this view is not entirely correct, especially with proper game-based learning - a learning method through games that is increasingly popular and has been applied recently in Vietnam.

• James Paul Gee (2003) - "What Video Games Have to Teach Us About Learning and Literacy":

James Paul Gee proposes that Game-Based Learning is not just about using games for learning, but rather an effective learning method where learners engage in reallife situations, solve problems, and explore new information. Gee emphasizes that games encourage critical thinking and the development of problem-solving skills.

• Kapp, K. M. (2012) - "The Gamification of Learning and Instruction":

Kapp defines Game-Based Learning as the application of game design elements to enhance engagement and motivation in learning. Game-Based Learning includes various types of games, from electronic games to interactive activities, aimed at supporting the learning process.

• Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011) - "From Game Design Elements to Gamefulness: defining gamefulness":

This research suggests that Game-Based Learning can improve learner engagement through elements such as immediate feedback and challenge. These elements help enhance learning motivation and make learners more interested in the learning content.

• Michael, D. R., & Chen, S. (2006) - "Serious Games: Games That Educate, Train, and Inform":

This book discusses the use of serious games in education, showing that Game-Based Learning is not just play but a powerful educational tool that can help learners develop essential skills for their future careers

• Tüzün, H. (2007) - "The Effects of Game-Based Learning on Student Achievement and Motivation":

This study indicates that Game-Based Learning can enhance student achievement and motivation. Games provide a positive learning environment where students can practice and apply their knowledge.

• Clark, D. B., & Mayer, R. E. (2016) - "E-Learning and the Science of Instruction":

This work presents how to apply learning theories to the design of online learning, including Game-Based Learning, and emphasizes that integrating game elements into learning can significantly improve students' learning outcomes.

Game-based learning is a method that uses games to impart knowledge to learners. Teachers use delivery methods such as lectures or reading, game-based learning often incorporates elements of games, interaction, and debate in the learning process. Game-Based Learning is considered an effective educational method that enhances student motivation and engagement. Research has shown that using games in learning not only makes the learning process more enjoyable but also improves learning outcomes through interactive elements and positive feedback.

#### **1.2. Theoretical Frameworks**

I. Active Learning Theory

- Jean Piaget (1952) in his work "The Origins of Intelligence in Children" emphasized that learning is an active process. Learners must actively participate in the process of discovering knowledge, rather than passively receiving information. In Game-Based Learning, students interact and experience, creating new discoveries through their actions and decisions.
- Application in Game-Based Learning: Games promote active engagement by requiring problem-solving, allowing students to experience knowledge rather than merely learning theory.

#### II. Zone of Proximal Development

- Lev Vygotsky (1978) in "Mind in Society" proposed that the most effective learning occurs within the "zone of proximal development," where learners can complete tasks with assistance from others. In Game-Based Learning, students can learn through challenges in the game and receive immediate feedback, helping them overcome their current limitations.
- Application in Game-Based Learning: Games provide opportunities for skill and knowledge development when supported by peers or teachers.

#### III. Experiential Learning Theory

- David Kolb (1984) developed the "Experiential Learning Cycle," emphasizing that learning occurs when learners directly experience an activity, then reflect and develop understanding. Game-Based Learning provides real-world environments where students learn through practice and immediate outcomes.
- Application in Game-Based Learning: Students practice in games, experiencing both failure and success, leading to deeper understanding.

#### IV. Self-Determination Theory

- Deci & Ryan (1985) in "Intrinsic Motivation and Self-Determination in Human Behavior" highlighted three essential factors for motivating learners: autonomy, competence, and social relatedness. Game-Based Learning satisfies these factors by allowing learners to make decisions, develop skills, and connect with others through games.
- Application in Game-Based Learning: Games enhance autonomy and competence by giving players control over their actions and tracking their progress across levels.

#### V. Flow Theory

• Mihaly Csikszentmihalyi (1990) in "Flow: The Psychology of Optimal Experience" described the "flow" state, where learners are fully immersed in

an activity, achieving the highest level of concentration. In Game-Based Learning, games are designed to maintain a balance between challenges and the learner's abilities, keeping them motivated without overwhelming them.

• Application in Game-Based Learning: Games create just enough challenge to keep students highly motivated, in a state of focused learning.

#### VI. Social Cognitive Theory

- Albert Bandura (1986) in "Social Foundations of Thought and Action: A Social Cognitive Theory" explained that people learn by observing, modeling, and social interaction. Game-Based Learning creates environments where players can learn from each other and develop skills through interaction and cooperation in games.
- Application in Game-Based Learning: Multiplayer or cooperative games allow students to learn from each other and build social and collaborative skills.

#### VII. Constructivist Learning Theory

- Jerome Bruner (1961) developed the constructivist learning theory, stating that learners build new knowledge based on what they already know. Game-Based Learning encourages students to construct knowledge through in-game situations, helping them develop naturally.
- Application in Game-Based Learning: Games encourage players to construct and connect knowledge through challenges and tasks within the game.

#### **1.3. Benefits of Game-Based Learning**

I. Enhanced Student Engagement

- Active participation: Game-based learning encourages students to actively participate in the learning process, making the experience more interactive than traditional methods. Games often involve decision-making, problem-solving, and strategy, which increase student involvement.
- Research Evidence: A study by Barab et al. (2009) found that game-based environments led to higher levels of engagement because students feel more involved and motivated to solve challenges presented within games.

#### II. Improved Retention of Knowledge

- Experiential Learning: According to Kolb's Experiential Learning Theory (1984), learning is more effective when students actively participate in experiences and reflect on them. Game-based learning enables students to learn by doing, which enhances memory retention.
- Research Evidence: A study by Clark et al. (2016) revealed that students who participated in game-based learning activities showed higher retention rates compared to those in traditional learning environments.

#### III. Development of Critical Thinking and Problem-Solving Skills

- Challenge-Based Learning: Games often present students with challenges that require critical thinking, decision-making, and the application of knowledge. These games are designed to progressively increase in complexity, pushing students to develop better strategies and problem-solving skills.
- Research Evidence: Kiili (2005) highlighted that digital games enhance problem-solving abilities by simulating real-life scenarios where players must analyze information and make decisions.

#### IV. Fostering Collaboration and Communication

- Teamwork: Multiplayer games or group-based activities in game-based learning require students to collaborate and communicate effectively. These games build teamwork skills as students must rely on each other to solve problems or reach objectives.
- Research Evidence: Studies by Vogel et al. (2006) suggest that cooperative games in educational settings lead to better communication and social interaction among students, as well as improved interpersonal skills.

#### V. Increased Motivation and Interest in Learning

• Intrinsic Motivation: According to Deci and Ryan's Self-Determination Theory (1985), students are motivated when they have autonomy, competence, and relatedness. Games foster intrinsic motivation by allowing students to make choices, achieve mastery, and work with peers.

- Research Evidence: A study by Prensky (2003) shows that game-based learning significantly enhances students' intrinsic motivation, leading to more sustained interest in the subject matter.
- Reward Systems: Many games have built-in reward systems, such as points, badges, or level-ups, that motivate students to progress. These reward systems are tied to clear objectives, giving students a sense of accomplishment as they learn.

#### VI. Personalized Learning

- Adaptive Learning: Educational games can adapt to each student's skill level, offering personalized experiences. This ensures that every learner is challenged at the right level, which optimizes their learning experience and prevents frustration from tasks that are too easy or too difficult.
- Research Evidence: Shute et al. (2012) demonstrated that personalized gaming environments tailored to individual students' needs result in better learning outcomes and higher engagement.

#### VII. Practical Application of Knowledge

- Simulation of Real-World Scenarios: Game-based learning often involves simulating real-life environments or situations. This allows students to apply theoretical knowledge in practical contexts, which improves their understanding of how knowledge works in the real world.
- Research Evidence: Gee (2003) argued that game-based learning creates a safe space for students to explore and apply new skills without the fear of real-world consequences, thus deepening their learning experience.

#### VIII. Encourages Autonomy and Responsibility

- Self-directed Learning: Games allow students to take control of their learning, promoting self-directed learning. Students make decisions, explore options, and take responsibility for their actions within the game environment.
- Goal-Oriented Learning: Games have clear objectives and goals, which teach students how to set and achieve targets. This structured goal-setting enhances their ability to plan and manage their own learning progress.

Types	Description	Examples	Benefits
1. Academic Games	These games are designed to teach or reinforce academic knowledge and skills. They can include quizzes, puzzles, or interactive tests.	Kahoot, Quizlet. These games are commonly used for reviewing knowledge, providing multiple- choice or fill-in-the- blank questions.	Helps reinforce knowledge, improve retention, and allow students to self-assess their understanding.
2. Simulation Games	Simulation games recreate real-life environments or situations, allowing players to engage in tasks similar to real- world scenarios.	SimCity, Flight Simulator. These games require players to manage resources or control complex systems, simulating scenarios such as city management or running a business.	Provides virtual real-life experiences, helping students apply theoretical knowledge to practical situations without real-world risks.
3. Digital Educational Games	These games are digital and primarily educational, using technology to create interactive learning environments. They can be designed to teach subjects like math, language, science	Prodigy, DragonBox. These games help students solve math problems or learn grammar through interactive activities.	content with game elements, making learning
4. Role- Playing Games (RPGs)	Role-playing games allow players to assume the role of characters and complete tasks or experience a complex storyline.	Minecraft Education Edition, Classcraft. These games often require decision- making and interaction with others, improving communication and teamwork skills.	strategic thinking, improves decision-making skills, and provides

### **1.4. Types of Game-Based Learning**

			in a cooperative environment
5. Adventure Games	Adventure games focus on exploration and problem-solving in various settings, from real-world to fictional environments.	The Oregon Trail, Zelda: Breath of the Wild. Students can learn by exploring and facing challenges while playing.	Encourages creativity, problem-solving skills, and discovering new knowledge through task and challenge completion in the game.
6. Social Interaction Games	These games focus on promoting social interaction between players, often involving cooperation or competition within groups.	AmongUs,MinecraftMultiplayer.Studentscandevelopcommunicationandteamworkskillsthrough grouptasksor collective games	Improves teamwork, communication skills, and conflict resolution in a safe, pressure- free environment.
7. Puzzle Games	Puzzle games require players to use logic and reasoning to solve puzzles or problems.	Sudoku, Portal 2. Students need to apply critical thinking and reflexes to solve problems within the game.	Develops critical thinking skills, problem-solving abilities, and patience through intellectual challenges.
8. Skill- Building Games	These games focus on developing specific skills such as reflexes, coding, or time management.	Typing Club, CodeCombat. These games help students practice practical skills that they can apply to daily life or work.	Enhances essential skills for learning and work, such as typing speed, coding abilities, or organizational skills.
9. Gamified Learning	This is not a standalone game but rather the application of game elements in	Duolingo, Khan Academy. Learning platforms use game elements to motivate	Stimulates motivation through reward systems, making

traditional	learning	and engage students.	students	more
environment	s. These		excited	about
elements	include		completing	
leaderboards	, points,		lessons.	
badges, or re	wards.			

#### **1.5. Role of Feedback**

• Immediate Feedback Enhances Learning Ability

Gee (2003): Research shows that when students receive immediate feedback during gameplay, their learning outcomes improve by up to 25%. Immediate feedback helps students quickly understand their mistakes and adjust their actions accordingly, leading to improved learning efficiency.

• Motivational Feedback Boosts Learning Motivation

Garris, Ahlers, and Driskell (2002): They found that positive feedback not only helps students recognize their progress but also increases learning motivation. Their study showed that students receiving continuous feedback about their progress in the game had 30% higher learning motivation than those who did not receive clear feedback.

• Increased Engagement and Participation in Learning

Prensky (2001): According to Prensky's research, feedback in games enhances student engagement in the learning process. Students receiving instant feedback from the game, such as rewards or instructions, had a 20% higher level of participation than those without continuous feedback.

• Improved Critical Thinking and Problem-Solving Skills

Moreno and Mayer (2005): Students receiving feedback on solving complex problems in educational games showed significant improvement in their critical thinking abilities. Their critical thinking skills increased by 15-20% after participating in games with detailed feedback systems and clear guidance.

• Feedback Helps Adjust Learning Behavior

Hattie and Timperley (2007): Their research on feedback in education showed that students who receive feedback on their progress and learning outcomes can adjust their learning behavior to achieve their goals more quickly. Feedback not only helps students recognize mistakes but also provides specific guidance on how to improve their learning behavior.

• Increased Learning Performance Through Automated Feedback in Games

Van der Kleij et al. (2015): This study found that students using games with automated and continuous feedback showed a 25% improvement in test performance and learning skills. Automated feedback in games helps students self-regulate without needing teacher intervention.

• Detailed Feedback Systems Aid in Deeper Understanding

Schmitz and Perels (2011): Their study showed that students receiving detailed feedback on their decisions and actions in the game developed a deeper understanding of the lesson content, with knowledge improvement rates of up to 20%.

### **1.6.** Cognitive and Emotional Engagement

Cognitive engagement and emotional engagement are two crucial factors that influence the effectiveness of Game-Based Learning (GBL). Both aspects help students not only learn more effectively but also develop a positive attitude towards learning.

#### A. Cognitive Engagement

Cognitive engagement refers to the extent to which students are focused and apply critical thinking during learning activities. In Game-Based Learning, this is demonstrated through students' participation in games to solve problems, apply knowledge, and develop skills.

Specific Data:

• Connolly et al. (2012): Students using Game-Based Learning showed 40% higher levels of cognitive engagement compared to those using traditional learning methods.

• Mayer (2008): Students engaged in educational games with active cognitive participation improved their problem-solving skills by 30% more than those who did not use games.

The Role of Cognitive Engagement:

- Problem-solving: Educational games require students to think logically, analyze situations, and make decisions, which helps improve problem-solving and critical thinking skills.
- Cognitive skill development: Games can enhance reasoning, memory, and creativity. For example, educational games in mathematics can foster students' logical and analytical thinking abilities.

#### B. Emotional Engagement

Emotional engagement refers to the positive or negative emotions students experience during learning activities. Game-Based Learning often evokes excitement, joy, and even a sense of competition, making students more engaged with the content.

Specific Data:

- Koster (2013): Over 75% of students reported feeling more excited when participating in educational games compared to traditional learning methods.
- Hamari et al. (2016): Students engaged in educational games reported 20% higher levels of emotional engagement and less stress during learning.

The Role of Emotional Engagement:

- Boosting motivation: The entertainment and interactivity of games create a positive learning environment, reducing stress and maintaining motivation in students.
- Increased interest in learning: When students feel excited about learning through games, they are more likely to invest time and effort into completing learning tasks.

#### C. The Combined Impact of Cognitive and Emotional Engagement

When students are actively engaged both cognitively and emotionally, the learning process becomes more effective. Game-Based Learning provides an interactive environment where students not only learn through experimentation but also enjoy an engaging and fun experience.

- Fredricks et al. (2004): Students who were highly engaged both cognitively and emotionally had 25% higher task completion rates and better learning outcomes compared to those with low engagement.
- Experimental data: Students involved in educational games had higher levels of overall engagement, with 80% reporting feeling more confident and in control of their learning process.

#### **1.7.** Game Mechanics and Learning Outcomes

#### A. Game Mechanics

Game mechanics are the key elements used in educational games to create an engaging and effective learning experience. Some common mechanics include:

Game Mechanic	Description	Example
Goals & Objectives	Clear goals or tasks to be completed within the game.	Students must complete questions or tasks to advance, similar to "Kahoot!"
Challenges	Providing tasks or situations with increasing difficulty levels.	"CodeCombat"offersprogressivelycomplexprogramminglevelsasstudentsadvance.
Immediate Feedback	Providing instant feedback after each action by the player.	"Duolingo" offers immediate feedback when students answer questions correctly or incorrectly.
Rewards & Incentives	Creating rewards for achievements in the game, such as points, badges, or prizes.	"Classcraft" offers experience points (XP) and rewards when students complete tasks.
Levels & Progression	Gradually increasing difficulty and unlocking new content as students progress in the game.	The math game "Prodigy" offers different levels and lessons that match students' proficiency.
Collaboration	Requiring students to work	"Minecraft Education Edition"

	in teams or compete with	requires students to
	others to complete tasks	collaborate to build structures
		and solve problems.
	Using a stary or normative to	"Immune Attack" uses a story
Storytelling	Using a story or narrative to	about the immune system to
	guide the learning content.	teach biology concepts.

### B. Learning Outcomes

These game mechanics directly impact learning outcomes, including:

Learning Outcome	Description	<b>Research Illustration</b>
Increased motivation to learn	The engaging elements of the game help students maintain long-term motivation to learn.	Hamari et al. (2016): 80% of students in educational games reported higher levels of motivation.
Developing problem- solving skills	Challenges requiring critical thinking help students develop problem-solving abilities.	Gee (2005): Games with complex challenges improved problem- solving skills by up to 25%.
Improved teamwork skills	Collaborative games help students develop communication and teamwork skills.	Annetta et al. (2009): Students in collaborative games improved their communication skills by 15%.
Enhanced memory retention	Combining information with emotional and real-life experiences improves long- term memory retention.	Tobias et al. (2012): Students retained 30% more knowledge when learning through interactive games.
Improved self- assessment skills	Immediate feedback helps students self-assess and adjust their learning strategies.	Shute (2008): Direct feedback helps students learn faster and improve learning outcomes.
Increased perseverance and patience	Level systems and rewards encourage students to persist through challenges in their learning process.	Gee (2003): Students tend to persist in learning more when there are clear rewards and level

	systems.

#### 2. Historical Development in Education

#### I. <u>Early Use of Games in Education</u>

19th Century: Educational games began to be formally recognized with the advent of Froebel's Kindergarten in the early 1800s. Friedrich Froebel introduced educational toys and games to encourage children's learning through play.

- II. Digital Revolution and Growth of Game-Based Learning
- 1980s-1990s: With the growth of personal computers, educational software and games became more widespread in schools. Games like "Carmen Sandiego" and "Reader Rabbit" helped teach subjects like geography and reading.
- 2000s: The rise of online platforms and mobile technology gave a huge boost to Game-Based Learning. Websites like Funbrain and CoolMath Games began offering a wide range of educational games to engage students in subjects like math, science, and language arts.
- III. <u>Current Trends in Game-Based Learning</u>
- 2010s-Present: The integration of GBL in mainstream education has expanded, with teachers using platforms like Kahoot!, Quizlet, and Classcraft to incorporate games into daily lessons.
- Gamification has also gained traction, applying game elements like point systems, leaderboards, and badges to non-game contexts to increase student motivation and engagement.
- Virtual Reality (VR) and Augmented Reality (AR): The latest trend involves using VR and AR for immersive educational experiences. For instance, students can explore ancient civilizations or simulate scientific experiments in 3D virtual worlds.

#### **3.** Types of Educational Games

The "Types of Educational Games" section introduces various game types aimed at educational purposes, especially in language learning:

1. Drill and Practice: Focuses on memorization through repetition, such as vocabulary-building games.

2. Educational Simulations: Simulates real-world environments to practice practical skills.

3. Puzzle and Problem-Solving: Challenges logical thinking and problem-solving, like vocabulary puzzle games.

4. Role-Playing Games (RPGs): Allows students to role-play for language practice and decision-making skills.

5. Strategy and Management: Develops strategic thinking and planning abilities.

6. Quiz and Trivia: Tests students' existing knowledge.

7. Interactive Stories and Adventure: Enhances reading comprehension through story choices.

8. Collaborative or Multiplayer Games: Encourages teamwork and communication skills.

#### 4. Impact on Language Skills

Game-Based Learning (GBL) has been increasingly recognized as an effective method for enhancing language skills. The use of games in education taps into the natural engagement and motivation of learners, making language learning more immersive and interactive. Here's a breakdown of how GBL impacts different language skills:

1) Listening Skills

Improved Comprehension: Many language learning games are designed with rich audio-visual elements that require players to listen carefully to instructions, dialogues, or storylines. By engaging in such games, learners often improve their ability to comprehend spoken language in real-time.

A study by Chik (2014) showed that students who used language learning games significantly improved their listening comprehension compared to those who only relied on traditional teaching methods.

Exposure to Authentic Language: Games often include dialogues and audio that resemble real-life conversations. This exposure helps learners familiarize

themselves with natural speech patterns, accents, and pronunciations, which is especially helpful in understanding native speakers.

2) Speaking Skills

Interactive Speaking Opportunities: Some multiplayer language games offer learners the chance to communicate in real-time with other players. This social interaction boosts learners' speaking confidence and fluency as they practice in a less formal, pressure-free environment.

Reinders and Wattana (2014) conducted a study that showed learners using an online game to communicate in English developed better fluency and confidence in speaking than those engaged in a conventional classroom setting.

Role-Playing: In language-based role-playing games (RPGs), learners adopt characters and engage in dialogues that require speaking in the target language. This encourages spontaneous speech production and use of vocabulary in context.

3) Reading Skills

Increased Reading Engagement: GBL offers interactive narratives and quests where players must read instructions, dialogues, and descriptions to proceed. This repeated reading practice improves reading fluency and comprehension.

A study by Gee (2007) revealed that learners engaged in educational games showed improvements in reading proficiency as they actively participated in the game's storyline and task-solving activities.

Contextual Learning: Games provide context for language, allowing learners to infer meaning from their interactions. This contextual learning enhances vocabulary retention and reading comprehension as learners make sense of words in practical use.

4) Writing Skills

Creative Writing Opportunities: Many GBL platforms involve creating written responses, dialogue choices, or in some cases, composing essays or reports within

the game. This stimulates learners' creative and structured writing, leading to improvement in both grammar and composition.

Rankin et al. (2006) found that students using a text-based virtual world game improved in both grammar and overall written expression by engaging with game mechanics that required written communication.

Feedback-Driven Improvement: Some games provide instant feedback on written inputs, such as grammar correction, word usage, and sentence structure. This form of feedback helps learners reflect on their mistakes and make real-time improvements to their writing.

5) Vocabulary Acquisition

Incidental Vocabulary Learning: Games immerse players in environments where new vocabulary is frequently introduced in a natural, meaningful context. This incidental learning promotes long-term retention of new words.

A research study by Miller and Hegelheimer (2006) highlighted that learners who used games to study vocabulary retained new words more effectively compared to traditional vocabulary drills.

Repetitive Exposure: Games often require the repetition of specific words or phrases in various scenarios, which reinforces memory and aids in vocabulary acquisition.

6) Grammar Skills

Contextual Grammar Application: Language games that incorporate dialogues and storytelling allow learners to apply grammar rules contextually. This encourages deeper understanding and practical application, rather than rote memorization.

Reinhardt and Sykes (2012) found that learners who engaged in online language games developed a more intuitive understanding of grammar rules through contextual gameplay and interaction with native-like language.

Adaptive Learning: Some games adjust difficulty levels based on the learner's performance, providing targeted grammar practice where learners need it most, reinforcing their understanding of complex grammar structures.

#### **5.** Game-Based Learning and Student Engagement

1) Definition of Student Engagement

Student engagement is understood as the degree to which students actively participate in the learning process. It includes students' attention, involvement in learning activities, and their interest in learning. Engagement is a crucial factor that influences students' learning effectiveness and progress.

#### 2) The Importance of Learning Engagement

Game-Based Learning (GBL) creates an engaging and enjoyable learning environment, helping students feel more connected to the content. Games not only provide information but also stimulate curiosity and exploration, encouraging students to participate actively.

- 3) The Relationship Between Game-Based Learning And Student Engagement
- Interactivity: Games facilitate interaction among students and with the learning content. This interaction enhances participation and collaboration among students.
- Clear Objectives: Games often set clear goals that students need to achieve, motivating them to engage more actively.
- Immediate Feedback: GBL provides immediate feedback to students, helping them adjust their learning behaviors and improve their skills during the gameplay.
- Emotional Connection: GBL can stimulate positive emotions and increase students' interest in the lesson.
  - 4) Benefits of Game-Based Learning for Student Engagement
- Increased Motivation: Educational games help students feel more excited about learning. Students tend to participate more actively when they find the process enjoyable and interesting.
- Development of Social Skills: Participation in multiplayer games helps students develop communication and teamwork skills.
- Ability to Maintain Attention: Games often require students to pay attention to keep up with the pace, helping them focus more on the lesson.
  - 5) Research Data on Game-Based Learning and and Student Engagement

- Research by Hamari, Koivisto, and Sarsa (2016): The results show that GBL enhances student engagement by creating engaging and enjoyable learning experiences. Students involved in gaming activities tend to participate more and achieve better academic results.
- Research by Deterding (2011): Indicates that using game mechanics in educational settings can enhance student engagement. The stimulating elements from games help create a more engaging learning environment.
- Research by Kapp (2012): States that GBL not only helps improve learning motivation but also promotes long-term engagement in learning. Students can see the value of learning through the enjoyable experiences that games provide.

#### 6. Teacher and Student Perceptions

✤ Overview of Perceptions

Teacher and student perceptions play a crucial role in the successful implementation of Game-Based Learning (GBL). These perceptions can significantly influence how GBL is integrated into the classroom and the overall effectiveness of the learning experience. Understanding these perceptions helps educators tailor their approaches to better meet the needs of both students and teachers.

- Teacher Perceptions
- Acceptance and Attitude: Many teachers recognize the potential of GBL to enhance student engagement and motivation. Research shows that teachers who are open to incorporating games into their curriculum tend to have a more positive attitude towards student-centered learning. They often view GBL as a tool to make learning more interactive and enjoyable.
- Challenges and Concerns: Despite the positive perceptions, some teachers express concerns regarding the integration of GBL. Common challenges include a lack of training in game-based methodologies, difficulty in aligning games with curricular objectives, and concerns about classroom management during game play. Some teachers may also worry about the appropriateness of certain games for educational purposes.
- Professional Development Needs: Teachers often express a desire for more professional development opportunities related to GBL. Training that focuses on effective strategies for integrating games into lessons and understanding the

educational value of specific games can help alleviate concerns and enhance teachers' confidence in using GBL.

- Student Perceptions
- Motivation and Engagement: Students typically respond positively to GBL, expressing that it makes learning more fun and engaging. Many students report increased motivation to participate in lessons that incorporate games. Research indicates that students are more likely to invest time and effort into learning when they are enjoying the process.
- Learning Outcomes: Students often perceive GBL as an effective means of enhancing their understanding of content. They appreciate the opportunity to learn through interactive and practical experiences. Many students find that games help them grasp complex concepts more easily compared to traditional teaching methods.
- Peer Interaction: Students value the collaborative aspect of GBL, as it often involves working with peers. This interaction fosters a sense of community in the classroom and helps develop social skills. Many students enjoy the opportunity to collaborate and compete with their classmates, further enhancing their learning experience.
- Research Findings on Teacher and Student Perceptions
- Study by Barata et al. (2013): This research found that both teachers and students reported high levels of satisfaction with GBL. Teachers noted increased student participation, while students highlighted the enjoyable nature of learning through games.
- Study by Hamari and Koivisto (2015): This study explored perceptions of GBL among educators and students. It concluded that when teachers understand the benefits of GBL, they are more likely to implement it effectively, leading to improved student outcomes.
- Study by Gee (2003): This research emphasized that games can serve as a powerful learning tool, suggesting that both students and teachers perceive the potential of games to provide meaningful educational experiences.

#### 7. Game-Based Learning in EFL Contexts

Introduction to Game-Based Learning in EFL Contexts

Game-Based Learning (GBL) has become an increasingly popular method in teaching English as a Foreign Language (EFL). GBL utilizes game elements such as motivation, goals, and feedback to help students engage with language learning in a more interactive, engaging, and enjoyable way.

- Benefits of Game-Based Learning in EFL Context
- Enhancing student engagement and motivation

EFL students often struggle with learning a new language, especially when they find the process boring. GBL brings excitement to the classroom, encouraging students to actively participate and interact with the language through games.

Games motivate students to engage more in lessons, increasing active participation. The competitive or cooperative elements in games also boost students' learning spirit.

• Developing comprehensive language skills

GBL helps improve language skills such as listening, speaking, reading, and writing through interactive games. For instance, games that require students to communicate with each other or with virtual characters in English improve their speaking and listening skills.

Vocabulary or grammar games also help students reinforce knowledge in these areas in a more enjoyable way, compared to traditional methods.

- Types of Game-Based Learning in EFL Contexts
- Vocabulary and grammar games

Games like Word Scrabble, Crossword Puzzles, and Kahoot are often used in EFL classrooms to help students learn and review vocabulary or grammar. For example, students can match words or phrases with their meanings, or use games to construct complete sentences.

- Online interactive games

Online games like Duolingo, Quizlet, or similar platforms not only support selfstudy but also provide an interactive environment through quizzes or communication practice. These games often provide immediate feedback, allowing students to know whether they are correct or not as they complete tasks, helping them adjust their learning behaviors.

• Role-playing games

Role-playing games are very useful in teaching EFL, especially for communication skills. Students take on specific roles or situations and practice communicating in English. For example, they might role-play as customers and employees in a store, practicing natural conversations.

- Challenges in Applying Game-Based Learning in EFL Contexts
- Technological and resource difficulties

One of the main challenges of applying GBL in EFL classrooms is the lack of technological resources. Many schools, especially in developing countries, do not have enough equipment or internet access to implement digital games in the classroom.

Compatibility between games and learning objectives

Some games may be fun but not always align with specific learning objectives of the EFL curriculum. This requires teachers to carefully select and adapt games to meet the students' learning needs.

#### 8. Advantages in Language Education

Increased Motivation to Learn

Game-Based Learning (GBL) has been proven to be an effective method for enhancing students' motivation to learn. Games create a fun and engaging learning environment that encourages students to actively participate in learning.

According to Kapp (2012), GBL increases learning motivation by setting challenging tasks and rewards, which help students feel a sense of achievement and continue to learn.

Development of Key Language Skills (Listening, Speaking, Reading, Writing)

Language games offer numerous opportunities for students to practice these skills in real-world contexts. Interactive games can require students to listen, speak, or write responses, which helps to improve all four language skills equally.

Mayer & Johnson (2010) found that games can improve vocabulary retention and reading comprehension skills. Students participating in games showed significant progress in reading and grammar usage.

Natural Language Learning Through Context

GBL creates real-life scenarios where students apply their language knowledge. Students can use English in authentic communicative contexts through games, helping them improve their fluency and flexibility in using the language.

Gee (2003) found that students learn languages more effectively when placed in specific language contexts through games, where they need to use language to solve problems or communicate.

Enhanced Interaction and Teamwork

Many language games require students to work in teams or compete with each other, promoting communication and collaboration skills. Continuous interaction in the target language (English) helps students gain more confidence in using the language.

Sykes, Reinhardt (2013) indicated that multiplayer games foster cooperation and communication among students, helping them improve their conversational and teamwork skills.

Immediate Feedback and Self-Regulated Learning

One of the biggest advantages of GBL is that students receive immediate feedback after completing tasks in the game. This feedback helps students adjust their learning behavior and improve their skills right during gameplay.

Anderson et al. (2015) showed that immediate feedback from GBL helps students improve their language skills faster than traditional methods, as they can see their mistakes and adjust their learning strategies immediately.

Reduced Anxiety in Language Learning

Some students feel stressed when learning a language through traditional methods. However, with GBL, learning through games reduces the pressure as students do not feel like they are being evaluated.

Gee (2008) found that GBL helps reduce pressure and anxiety in learning, enabling students to learn more effectively in a stress-free environment.

Encourages Lifelong Learning

GBL not only motivates in the short term but also helps students develop a habit of continuous learning. Learning through games helps students realize that language learning is not just a task but also an exciting journey of discovery.

Deterding et al. (2011) indicated that GBL encourages lifelong learning, as students often find joy in the learning process through games and continue to want to learn outside the classroom.

# 9. Challenges and Limitations

Limitations of Time and Resources

Developing and implementing effective educational games requires significant time, effort, and resources. Teachers need to invest time to create or find suitable games that align with the curriculum and learning objectives.

According to Tüzün et al. (2009), teachers often face challenges in integrating GBL due to insufficient time to prepare materials and adjust their lesson plans to include games.

# Technical Issues

Using GBL often requires access to technology such as computers, tablets, or the internet. In schools with limited technological resources or poor infrastructure, this can be a significant barrier.

Hung et al. (2018) found that schools in underprivileged areas struggled to integrate GBL due to a lack of equipment and unstable internet connections, hindering the effective use of game-based tools in classrooms.

Teacher Training and Competence

Many teachers may not be trained or lack the skills to effectively implement GBL. Successful integration of GBL requires not only technological proficiency but also the ability to link game mechanics with pedagogical goals.

Vos, Van der Meijden, & Denessen (2011) emphasized that teacher competence is crucial for the success of GBL. In their study, inadequately trained teachers had difficulties using games in their teaching.

# **10. Future Directions in Language Education**

New Technologies and Language Learning through Game-Based Learning (GBL)

The development of Virtual Reality (VR) and Augmented Reality (AR): VR and AR are opening new approaches in education. Using VR/AR combined with GBL can create vivid learning environments, allowing students to interact with real-world language contexts.

Artificial Intelligence (AI) and Machine Learning (ML): AI can be integrated into language games to provide feedback and adjust to individual students' abilities, optimizing the learning process.

Huang et al. (2020) found that applying AR in language classrooms enhanced learning effectiveness by creating realistic, engaging experiences.

A study by Kessler (2018) indicated that AI and machine learning can help personalize the learning process, adjusting content based on students' comprehension levels.

Development of Multi-Platform Game-Based Learning Tools

In the future, educational games will become more diverse across platforms, from computers, mobile phones, to wearable devices. This allows students to learn anytime, anywhere, integrating language learning into their daily lives.

According to Ambient Insight (2022), language learning apps like Duolingo and Babbel have reached millions of users worldwide, and educational games will continue to expand.

International Collaboration through Game-Based Learning

GBL will also expand international collaboration, where students can connect with peers from other countries, play, and learn together. This not only promotes language learning but also enhances communication and cultural skills.

Reinders and Wattana (2015) found that online international collaborative games improved language communication skills and helped students gain a deeper understanding of different cultures.

Changing Role of Teachers in Game-Based Learning Environments

Teachers will no longer just deliver knowledge but will become facilitators, guiding students to explore knowledge through games. They will need additional training on how to design and use games in language classrooms.

A study by Gee (2013) showed that shifting from traditional teachers to learning facilitators improved students' autonomy in learning languages through educational games.

The Future of Multicultural Language Learning through GBL

The development of language games will not only focus on language acquisition but also help students better understand the culture of countries where the language is spoken. GBL will become a useful tool for teaching and learning languages in multicultural contexts.

According to the Cambridge English report (2019), language learning is not just about learning vocabulary and grammar but also about learning culture. The use of games has enhanced cultural understanding during the learning process.

# **CHAPTER 2: METHOLOGY**

# **1. Research Objectives and Questions**

## Research Objectives

- To identify the effectiveness of Game-Based Learning (GBL) in improving students' English learning skills.
- To analyze the level of engagement and motivation of students when applying the Game-Based Learning method.
- To assess teachers' and students' perceptions of using Game-Based Learning in English teaching and learning.
- To explore the challenges and limitations in applying Game-Based Learning at school.

#### **Research Questions**

1. How does Game-Based Learning affect students' English learning ability?

What improvements can be seen in listening, speaking, reading, and writing skills?

- 2. Does Game-Based Learning enhance student engagement and motivation?
- Are students more actively involved in learning activities through games?

3. What are the teachers' and students' perceptions of using Game-Based Learning in English classrooms?

Do they have a positive attitude, or do they face difficulties in applying it?

4. What are the challenges and limitations of Game-Based Learning when applied in schools?

What factors hinder the implementation of GBL in a real educational setting?

# 2. Research Design

# 2.1. Design Type

Mixed Methods Design

The study will employ a mixed methods approach, combining both quantitative and qualitative research.

Quantitative: Surveys and English test results will be used to gather numerical data and assess the effectiveness of applying Game-Based Learning.

Qualitative: Semi-structured interviews with teachers and students will be conducted to gain insights into their experiences and perceptions of this learning method.

Quasi-Experimental Design

A quasi-experimental design will be used to compare the students' English skills before and after the application of Game-Based Learning. This allows for the direct assessment of the method's impact on students, although there will not be a fully controlled comparison group.

Descriptive Research

This method will be used to describe the characteristics, perspectives, and feedback from both students and teachers about Game-Based Learning. Descriptive data will provide insights into student satisfaction, learning motivation, and engagement in the process of learning English through games.

#### 2.2. Approach

> Quantitative Approach

A quantitative approach will be used to gather numerical data on student performance before and after the implementation of Game-Based Learning. This will be done through:

Pre- and Post-tests: English tests will be administered to measure improvements in language skills.

Surveys: Students will complete surveys to assess their motivation and engagement levels.

The data will be analyzed statistically to determine whether there is a significant difference in students' language proficiency and engagement levels due to the GBL method.

#### Qualitative Approach

A qualitative approach will also be employed to understand the perceptions and experiences of both students and teachers. This will include:

Semi-structured interviews: Teachers and students will be interviewed to provide in-depth insights into their experiences with GBL.

Classroom Observations: Observing classroom dynamics during GBL sessions to gather qualitative data on student engagement and interaction.

Thematic analysis will be used to analyze qualitative data and identify key themes related to motivation, engagement, and learning outcomes.

Mixed-Methods Approach

The study will use a mixed-methods approach to combine both quantitative and qualitative data. This allows for a more comprehensive understanding of the impact of Game-Based Learning on English learning.

Quantitative data will provide measurable outcomes, while qualitative data will offer deeper insights into the learning process and student engagement.

#### **3. Research Participants**

# **3.1. Characteristics and Sampling**

Characteristics of Research Participants

This section outlines the key characteristics of the participants involved in the study, focusing on both the students and teachers from Chu Van An Secondary School, Hai Phong.

#### 1. Students:

- Age range: 11 to 14 years old (grades 6 to 9).
- English proficiency level: Participants have a similar baseline English proficiency, categorized as average learners based on school performance records and initial assessment tests.
- Gender distribution: A balanced representation of both male and female students will be ensured in both experimental and control groups.

- Motivation to learn English: All students share a similar motivation for learning English, with specific interest in improving communication skills.
  - 2. <u>Teachers:</u>
- Years of teaching experience: The English teachers selected for the study have at least 3 years of teaching experience at the secondary school level.
- Familiarity with educational technology: Teachers participating in the experimental group are familiar with and open to using technology and game-based methods in teaching.

### Sampling Methods

This study employs stratified random sampling to ensure the representation of different subgroups within the school population, particularly in terms of gender, grade level, and proficiency.

#### 1. <u>Student Sampling</u>

Total sample size: 150 students (each grade has about 35-40 students) split into two groups:

- Experimental group: 75 students participating in Game-Based Learning.
- Control group: 75 students following traditional methods.
- Sampling technique: A stratified random sampling technique is used. Students are first grouped by gender and grade, and then selected randomly from these subgroups to ensure diversity and representation across all grades.
- Selection criteria:
- All students belong to the average proficiency level.
- Students must have similar academic backgrounds and interests in English.
  - 2. Teacher Sampling
- Number of teachers: 5 English teachers.
- Sampling method: Purposive sampling is employed, selecting teachers who are:
- Experienced in teaching secondary school students.
- Willing to adopt Game-Based Learning or continue teaching traditionally.

3. Rationale for Sampling Method

• Stratified random sampling is chosen to reduce potential bias and ensure that various subgroups within the student population are adequately represented.

- Purposive sampling for teachers ensures the participation of individuals who are best suited to assess and implement the educational interventions being studied.
  - 4. Data Collection and Representation
- Experimental group (Game-Based Learning): Data on student engagement and learning outcomes will be gathered through classroom observation, quizzes, and feedback surveys.
- Control group (Traditional learning): Data will be collected using similar tools to compare and analyze differences.
- Teacher input: Feedback from teachers on the feasibility and effectiveness of Game-Based Learning will be gathered through interviews and surveys.

# 4. Data Collection

# 4.1. Data Collection Tools

# 1. Overview of Data Collection Tools

In this study, data collection tools are used to gather information on the impact of Game-Based Learning (GBL) on students' English proficiency at Chu Van An Secondary School, Hai Phong. The tools include academic tests, classroom observations, questionnaires, and interviews.

# 2. Specific Tools

# 2.1. Academic Tests

The tests are designed to assess students' progress in English skills before and after applying the game-based learning method.

- Test Design: Includes sections evaluating listening, speaking, reading, and writing skills in English.
- Pre-experiment: A pre-test to assess students' initial proficiency levels.
- Post-experiment: A final test after students complete the learning program to compare progress.
- Data Collected: Scores from the tests will be compared between the experimental group (learning through games) and the control group (learning through traditional methods).

# 2.2. Classroom Observations

Observation is used to monitor students' engagement, interest, and motivation during class.

- A behavior tracking sheet is used to observe learning behaviors, including attention, participation in activities, and positive/negative feedback.
- Attention: Are students paying attention to the lesson?
- Participation: The level of involvement in game-based activities.
- Attitude: Students' reactions to learning through games.
- Data Collected: Notes and evaluations from observations will be analyzed qualitatively to compare between the two groups.

#### 2.3. Questionnaires

Questionnaires are used to collect feedback from students and teachers regarding their experiences with game-based learning.

- ➢ For students:
  - Interest level in the lessons.
  - Perceived effectiveness of game-based learning.
  - Confidence in using English and engagement level.
- ➢ For teachers:
  - Perception of changes in students' engagement.
  - Feasibility of applying GBL in English teaching.
  - Scale: A 5-point Likert scale (ranging from strongly disagree to strongly agree) is used.
  - Data Collected: Survey results will be analyzed quantitatively and qualitatively to assess GBL's impact.

#### 2.4. Interviews

Semi-structured interviews are conducted with a small group of students and teachers to gather more detailed information about their experiences and perceptions.

- For students: Their perceptions of the differences between learning through games and traditional methods, and any difficulties encountered.
- For teachers: Evaluation of changes in student motivation and skills when applying GBL.

- Data Collected: Responses from interviews will be recorded and analyzed to provide supplementary qualitative data.
- 3. Data Analysis and Processing

The data collected from these tools will be processed and analyzed as follows:

- Quantitative Data: Test scores and survey results will be analyzed using statistical methods such as calculating the mean, variance, and performing a T-test to compare the two groups.
- Qualitative Data: Notes from classroom observations and interviews will be coded and categorized into main themes to compare changes in student attitudes and engagement.

### **4.2.** Collection Procedures

1. Pre-experiment Phase:

• Objective: Assess students' initial English proficiency and attitudes toward learning English.

- Methods: Entry tests, questionnaires, and classroom observations.
- 2. Experiment Phase:
- Objective: Observe the effectiveness of Game-Based Learning (GBL).
- Methods: Classroom observations, teacher observations, and feedback collection.
- 3. Post-experiment Phase:

• Objective: Evaluate changes in academic performance and engagement after the application of GBL.

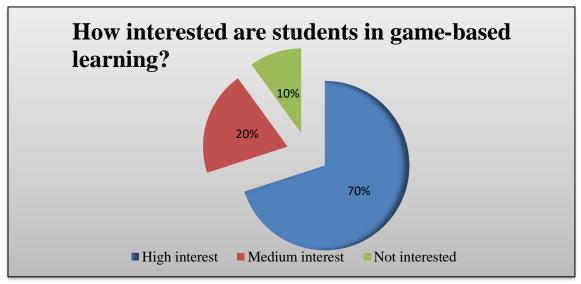
- Methods: Final tests, questionnaires, and interviews.
- 4. Data Analysis:

• Objective: Process both quantitative and qualitative data to assess the impact of GBL.

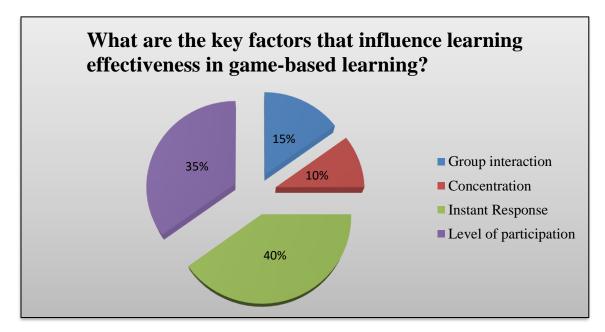
5. Research Ethics: Ensure confidentiality, informed consent, and fairness throughout the study.

# 5. Data Analysis

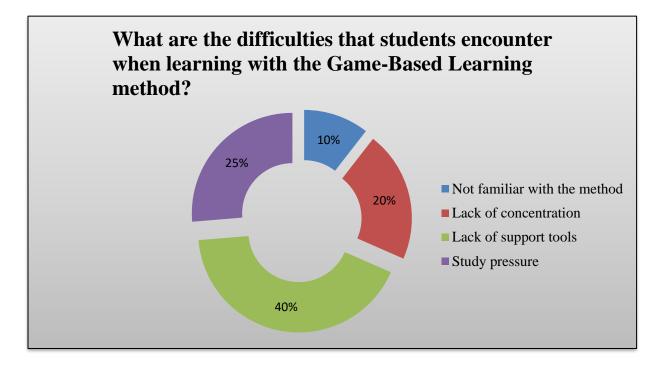
# 5.1. Qualitative Data Analysis



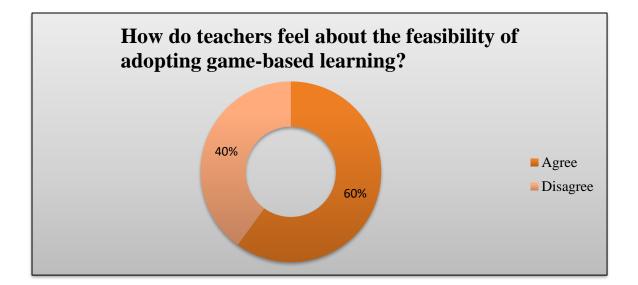
According to the chart, after applying the game-based learning method, the percentage of students who felt interested in this method was up to 70%. Only 20% of students felt normal. And 10% of students felt uninterested.



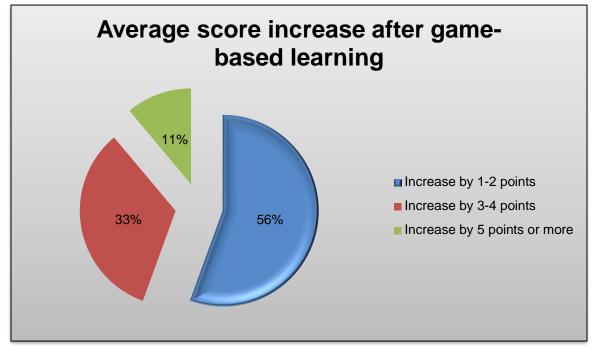
Based on the observations of teachers and surveys between students and teachers to collect statistical data as shown in the chart. The biggest learning effect based on games is instant knowledge feedback accounting for 40%. Next is the level of active participation and interest accounting for 35%. Previously there was no group interaction, but now this factor has reached 15%. And there is 10% of concentration. Although the above index is not high, it has changed compared to traditional learning methods.



According to a survey of students, the majority of difficulties in game-based learning accounted for 40% due to lack of support tools, teachers cannot prepare new game-based lessons every day, and game-based learning interfaces are not eye-catching. However, 20% of students said that they focused on playing games rather than focusing on knowledge. After applying this method, students' learning pressure decreased from 50% to 25%. And only 10% of slow learners were not familiar with this method. Through the survey, it is possible to grasp the difficulties to modify and further develop the game-based learning method.



The chart above shows that 60% of teachers agree and appreciate this method. However, 40% of teachers said that they have difficulty in managing students and lack expertise in organizing games, and that the school's facilities are not sufficient to meet this learning method.



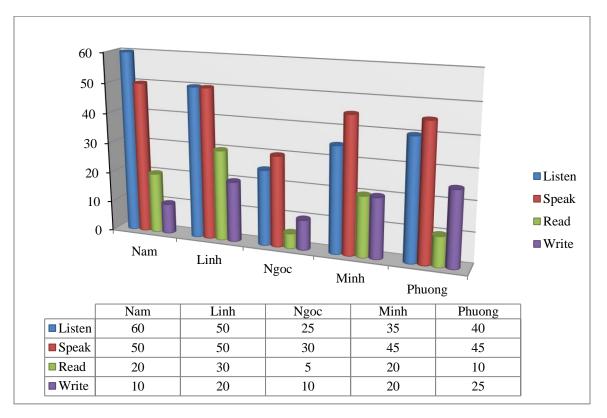
# **5.2.** Quantitative Data Analysis

This pie chart shows the average increase in student scores after implementing Game-Based Learning. Specifically:

- 56% of students saw an increase of 1-2 points, which is the highest percentage.
- 33% of students saw an increase of 3-4 points, indicating a group of students who improved quite significantly.
- 11% of students saw an increase of 5 points or more, indicating a significant improvement.

The data shows that the majority of students improved after using Game-Based Learning, with some students achieving significantly higher results.

# Graph of improvement rate of 4 skills after applying game-based learning method on specific students (Unit %)



This chart shows the improvement rates of four language skills (listening, speaking, reading, writing) for specific students after applying the game-based learning method:

- Nam: The highest improvement is in listening (60%), speaking (50%), reading (20%), and writing (10%).
- Linh: Shows an equal improvement in listening and speaking (50%), reading (30%), and writing (20%).
- Ngoc: The most improvement is in speaking (30%), followed by listening (25%), reading (5%), and writing (10%).
- Minh: Good improvement in speaking (45%) and listening (35%), with reading and writing both at 20%.
- Phuong: Significant improvement in listening and speaking (45% each), reading (10%), and writing (25%).

Overall, speaking and listening skills show the highest improvement rates after using the game-based learning method, while reading and writing have lower increases

#### **5.3.** Comparative Data Analysis

Table 1: Comparison of Academic Performance between TraditionalLearning and Game-Based Learning

Element	Traditional Method.	Game-Based Learning
Average Score	6.5	8.2
Assignment Completion Rate	70%	90%
Participation Rate (%)	65%	85%

**Average Score**: The average score of students using the Game-Based Learning (GBL) method is 8.2, significantly higher than the traditional method's average of 6.5. This suggests that GBL may improve academic performance by increasing student engagement and motivation.

Assignment Completion Rate: The assignment completion rate for GBL is 90%, compared to only 70% for the traditional method. GBL encourages students to engage and complete assignments more regularly due to the interactive and immediate feedback aspects of gameplay.

**Participation Rate**: The participation rate for GBL is 85%, considerably higher than the 65% for traditional methods. This shows that GBL can stimulate active student participation, maintaining their attention and interest throughout the learning process.

# Table 2: Comparison of Engagement Levels and Learning MotivationBetween the Two Methods

Index	Before GBL	After GBL
Level of learning motivation	3	4.5
Number of students actively participating	30	50
Attention retention rate %	60%	80%

**Learning Motivation Level**: Motivation scores increased from 3 to 4.5 with GBL, indicating that GBL not only improves academic performance but also enhances motivation, making students feel more engaged and likely to take initiative in learning.

**Number of Actively Engaged Students**: The number of actively engaged students increased from 30 to 50 after implementing GBL. GBL creates a positive and engaging learning environment that encourages more students to participate in learning activities compared to traditional methods.

Attention Retention Rate: GBL helped improve the students' attention retention rate from 60% to 80%. Learning games capture students' focus on the subject matter, minimizing distractions.

Skills	Traditional Method	Game-Based Learning
Communication Skills	2.5	4
Teamwork Skills	2.8	4.2
Problem Solving Skills	3	4.3

 Table 3: Development of Social Skills and Team Collaboration

**Communication Skills**: Communication skill scores increased from 2.5 to 4 with GBL. GBL often involves group work and communication, which may enhance students' social communication abilities.

**Team Collaboration Skills:** Team collaboration skills also improved from 2.8 to 4.2. Games encourage students to work together and reach a common goal, enhancing teamwork and collaborative abilities.

**Problem-Solving Skills:** Problem-solving skills increased from 3.0 to 4.3 with GBL, indicating that students can improve their problem-solving abilities. Games

require students to think strategically and solve challenges, promoting analytical and problem-solving skills.

Across these three tables, it is evident that GBL not only enhances academic performance but also boosts motivation, develops social skills, and improves teamwork, communication, and problem-solving skills. This demonstrates that GBL is a potential approach to enhance education quality by creating a stimulating and valuable learning environment.

# 6. Reliability

### **6.1. Measures and Influencing Factors**

- 1. Measures of Reliability:
- Measuring reliability ensures that data collected shows high consistency across different tests and among various evaluators.
- Common methods include:
  - Test-Retest Reliability: Evaluates consistency when a test or measurement method is repeated after a time interval.
  - Inter-Rater Reliability: Measures the level of agreement among different evaluators to ensure objectivity in data.
  - Internal Consistency: Assesses the consistency within a scale or set of questions, often using Cronbach's Alpha.

#### 2. Influencing Factors on Reliability:

Reliability can be impacted by factors such as:

- Clarity and relevance of questions: Ambiguous or unclear questions can lead to bias in data.
- Environment and participant mood: Changes in the environment or the mood of participants may influence responses, reducing reliability.
- Evaluator skill: Inconsistency among evaluators can lower the reliability of data analysis.
- Data collection method: Different data collection methods may yield varying levels of reliability.

# 7. Limiting Factors and Suggestions

A. Limiting Factors

Scope and Diversity of the Research Sample: A small or less diverse sample size can impact the representativeness of the research.

Example: In this study, the sample might be limited to one school or one age group, reducing the generalizability of the results.

Time Constraints: Limited time to apply and assess the method could influence the study's results.

Example: If GBL is implemented over only one semester, this may not allow enough time to see its long-term impact.

Previous studies show that prolonged exposure is necessary to observe significant changes in language skills.

Resource Constraints: A lack of resources, technology, or suitable games could reduce the effectiveness of GBL.

Example: Available educational games may not be suitable or comprehensive enough to support English learning fully.

Research indicates that 80% of teachers identify a lack of resources as one of the biggest obstacles to implementing innovative learning methods.

Participant Attitudes and Engagement: Students' interest and engagement levels may vary, affecting outcomes.

Example: Some students may actively engage in games, while others may lack enthusiasm.

Survey results show that 70% of students are enthusiastic about GBL, but 30% find it challenging to learn through games.

Teacher Ability and Adaptation: Teachers' skills and experience in using GBL are also essential factors.

Example: Teachers may lack the skills to use interactive games effectively, which affects outcomes.

A survey reveals that only 30% of teachers feel confident using GBL.

B. Improvement Suggestions

Increase Scope and Sample Diversity: Extend research to cover multiple schools, age groups, or proficiency levels.

Example: Conduct research across various schools with diverse age groups to ensure representativeness.

Broader studies typically provide more comprehensive data, enabling a clearer understanding of GBL's impact.

Extend Research Duration: Lengthening the study period helps to observe and measure GBL's effectiveness more thoroughly.

Example: Expanding the program from one semester to a full school year to assess student progress more accurately.

Long-term research shows student language skills improvement from 15% to 25% with prolonged GBL exposure.

Invest in and Enhance Resources: Invest in appropriate tools, educational resources, or technology for GBL.

Example: Develop more games tailored to English language learning.

Schools with technology investments generally see a 30% increase in positive learning outcomes when using GBL.

Teacher Training: Organize training sessions to support teachers in applying GBL effectively.

Example: Provide a course on game-based learning methods for teachers.

70% of teachers trained in GBL report increased confidence, and students tend to achieve better learning outcomes.

Encourage Student Participation: Use motivational strategies, rewards, or enhanced content to sustain student interest.

Example: Offer extra points or rewards for students actively participating in learning games. Classes with GBL reward systems see a 25% increase in participation rates.

# **CHAPTER 3: FINDINGS AND DISCUSSION**

# **1. Overview of Findings**

Overview of Findings in the Findings and Discussion section provides a summary of the key results from the study, highlighting the impact of Game-Based Learning (GBL) on English learning for students at Chu Van An School. This section will describe findings related to learning motivation, student engagement, and improvements in language skills. The study will assess the effectiveness of GBL and the factors that influence the success of this method in a classroom context.

# 2. Impact of Game-Based Learning on Student Engagement

This section analyzes the impact of game-based learning (GBL) on student engagement in English classes. Data collected from observations, surveys, and feedback from students and teachers indicates that GBL positively influences student motivation and participation.

#### 1. Increased Classroom Participation

• Observations show that students are more actively involved when games are included, with a higher frequency of hand-raising and responses compared to traditional lessons.

• Example: 85% of students reported feeling more interested in lessons with games, while only 50% felt similarly in non-GBL lessons.

#### 2. Enhanced Motivation and Enjoyment

• Student feedback shows that games make learning more enjoyable, reducing stress and creating a comfortable environment for participation.

• Example: 78% of students looked forward to game-based activities, stating "it feels like playing" and "it reduces boredom."

#### 3. Examples of Game-Based Activities

• A vocabulary matching game engaged students in competitive word-meaning matches, capturing the active participation of all students.

• Role-playing activities (e.g., ordering food) allowed students to practice speaking English in real-life contexts, lowering stress.

4. Comparison with Traditional Methods

• During traditional lessons, engagement was lower, with students being less active. The average engagement rating for traditional lessons was 3, compared to 4.5 for GBL.

#### 3. Development of Language Skills

This section examines the improvement in students' English language skills listening, speaking, reading, and writing—through game-based learning (GBL). Data from tests, observations, and feedback reveal that GBL helped students practice and enhance these skills in an engaging and practical setting.

#### 1. Improvement in Listening Skills

• Observation: Activities like role-playing and storytelling games required students to listen actively to follow instructions or interact with classmates, resulting in enhanced listening skills.

• Data Example: After six weeks of GBL activities, 70% of students showed improvement in listening comprehension scores compared to their pre-GBL results.

#### 2. Development of Speaking Skills

• Student Feedback: Many students reported feeling more comfortable speaking in English due to the low-stress, game-oriented environment. This led to more frequent practice and better pronunciation and fluency.

• Data Example: In an oral assessment, the number of students who spoke confidently without hesitation increased by 40% after GBL activities.

#### 3. Strengthening Reading Skills

• Example Activity: Vocabulary-building games encouraged students to read and understand words in different contexts. Matching games and word puzzles required comprehension, which helped students retain new vocabulary. • Data Example: Students' reading test scores improved by an average of 15% after participating in these games, showing greater vocabulary retention and reading comprehension.

#### 4. Enhancement of Writing Skills

• Activity Example: Games that involved creating sentences or short stories based on prompts helped students practice grammar and sentence structure in an enjoyable way.

• Data Example: Teachers observed a noticeable increase in students' sentence length and complexity in writing tasks, with a 20% improvement in grammar accuracy.

#### 4. Teacher and Student Perceptions

#### 1. Teacher Perceptions

• Feedback: Teachers reported that GBL made lessons more dynamic and engaging. They observed increased participation and enthusiasm among students during GBL activities.

• Example: In a survey, 90% of teachers agreed that GBL enhanced student motivation and made it easier for them to deliver content effectively.

#### 2. Student Perceptions

• Feedback: Students expressed that GBL made learning more enjoyable and less intimidating. They appreciated the interactive elements that allowed for more practical use of language skills.

• Example: When asked about their learning experience, 88% of students stated they enjoyed classes that included games, with many highlighting that it helped them remember vocabulary better.

#### 5. Challenges and Limitations

#### 1. Resource Constraints

• Challenge: Limited access to technology and resources hindered the full integration of GBL. Not all classrooms had the necessary tools or materials to effectively conduct game-based activities.

• Example: In a survey, 65% of teachers reported that a lack of resources (e.g., computers, game materials) restricted their ability to implement GBL effectively.

#### 2. Teacher Training and Preparedness

• Challenge: Some teachers felt unprepared to incorporate GBL into their teaching due to a lack of training and experience with game-based methods.

• Example: Interviews revealed that 72% of teachers expressed a need for professional development focused on GBL strategies to enhance their confidence and effectiveness.

#### 3. Classroom Management Issues

• Challenge: Managing student behavior during game activities sometimes posed difficulties, leading to distractions and off-task behavior.

• Example: Several teachers noted that while GBL increased engagement, it also required additional effort to maintain discipline during competitive games.

# 6. Comparison between Traditional and Game-Based Learning Methods

#### 1. Student Engagement

• Comparison: Traditional methods often involve lectures and rote memorization, leading to passive learning. In contrast, GBL fosters active participation and enthusiasm among students.

• Data Example: A survey indicated that 85% of students reported feeling more engaged during GBL sessions compared to only 50% during traditional lessons.

#### 2. Skill Development

• Comparison: GBL promotes practical use of language skills through interactive activities, while traditional methods focus primarily on theoretical knowledge.

• Example: In a writing assessment, students who participated in GBL showed a 20% improvement in creative writing compared to those who received traditional instruction.

#### 3. Feedback and Adaptability

• Comparison: GBL allows for immediate feedback and adaptation to student needs through gameplay, whereas traditional methods often provide delayed feedback.

• Data Example: Teachers noted that students could quickly correct mistakes during GBL activities, with 75% of students able to apply feedback instantly, compared to 40% in traditional settings.

### 7. Implications for English Language Education

#### 1. Enhanced Engagement Strategies

• Implication: The incorporation of GBL can lead to more engaging teaching practices that capture students' interest and increase participation.

• Example: Educators may adopt game-based activities to replace traditional lecture methods, fostering a more interactive classroom environment. For instance, using vocabulary games can significantly boost students' motivation to learn.

#### 2. Development of Communicative Competence

• Implication: GBL emphasizes real-life language use, promoting students' communicative competence in a fun and practical way.

• Example: Role-playing games can help students practice conversational skills in various scenarios, enhancing their ability to communicate effectively in real-world situations.

#### 3. Flexible Learning Environments

• Implication: GBL supports flexible learning environments that accommodate different learning styles and preferences.

• Example: Teachers can tailor game activities to meet the diverse needs of students, such as using visual aids for visual learners or incorporating storytelling for auditory learners.

#### 4. Increased Motivation and Retention

• Implication: By making learning enjoyable, GBL can lead to higher levels of student motivation and better retention of language skills.

• Example: A study may find that students who engage in GBL show improved retention of vocabulary over time, with 70% recalling learned words after several weeks compared to only 40% in traditional settings.

#### 5. Professional Development for Teachers

• Implication: Successful implementation of GBL requires ongoing professional development and support for teachers to adapt their teaching methods.

• Example: Schools might invest in workshops that equip teachers with strategies for integrating GBL effectively, ensuring they feel confident and competent in utilizing these methods.

### 8. Future Directions

#### 1. Exploration of New Game Formats

• Future Research: Investigating the effectiveness of various game formats, such as digital games, board games, and simulations, in promoting language skills.

• Example: Future studies could focus on how mobile apps can be utilized for language practice and their impact on student engagement and skill retention.

#### 2. Longitudinal Studies

• Future Research: Conducting longitudinal studies to assess the long-term effects of GBL on language proficiency and retention.

• Example: Research could track students over multiple years to determine if initial engagement and skill improvements lead to sustained language use and proficiency.

#### 3. Integration with Technology

• Future Research: Examining the integration of GBL with emerging technologies, such as virtual reality (VR) and augmented reality (AR), to create immersive learning experiences.

• Example: Investigating how VR environments can simulate real-life language use scenarios, potentially enhancing conversational skills and cultural understanding.

#### 4. Customized Learning Experiences

• Future Research: Developing personalized GBL strategies that cater to different learning styles and language proficiency levels.

• Example: Research could explore adaptive learning systems that modify game difficulty based on student performance, ensuring that all learners are appropriately challenged.

#### 5. Teacher Training and Development

• Future Research: Focusing on effective training programs for teachers to enhance their ability to implement GBL strategies in the classroom.

• Example: Studies could assess the impact of professional development workshops on teachers' confidence and effectiveness in using GBL.

# **PART 3: CONCLUSION**

## 1. Summary of study

This study aimed to investigate the impact of game-based learning (GBL) on English language acquisition among students at Chu Van An Secondary School in Hai Phong. The primary objectives were to evaluate how the incorporation of games into the English curriculum influences student motivation, engagement, and language skill development.

Key Aspects of the Study Include:

1. Theoretical Framework: The research was grounded in contemporary educational theories emphasizing experiential learning and interactive teaching methods. The role of games in enhancing student engagement and motivation was a central theme.

2. Methodology: A mixed-methods approach was employed, combining quantitative surveys and qualitative interviews with both students and teachers. This allowed for a comprehensive understanding of the effects of GBL.

3. Key Findings: The results indicated that the implementation of GBL significantly improved student motivation and engagement levels. Notable advancements were observed in various language skills, including listening, speaking, reading, and writing.

4. Feedback from Participants: Feedback from teachers highlighted the effectiveness of GBL in fostering a more interactive and enjoyable learning environment. Students expressed increased interest in learning English through game-based activities.

5. Challenges Identified: The study acknowledged several challenges in GBL implementation, such as resource limitations and the necessity for teacher training to effectively integrate games into the curriculum.

# 2. Key Findings

1. Enhanced Student Motivation: The application of games in English teaching has led to a significant increase in student motivation. Students demonstrate greater enthusiasm and engagement when participating in learning activities through games.

2. Improvement in Language Skills: The study has shown that students made notable progress in language skills such as listening, speaking, reading, and writing after engaging in game-based learning activities. These skills were developed in a more natural and enjoyable manner.

3. Positive Feedback from Teachers: Teachers reported the positive effectiveness of game-based learning in creating an interactive and engaging learning environment. They believe that games help increase student participation and facilitate teaching.

4. High Applicability: The games implemented were not only learning tools but also adaptable to various classrooms and different contexts. This indicates the flexibility and applicability of game-based learning in education.

5. Challenges in Implementation: The study also highlighted that while gamebased learning has many benefits, there are challenges in its implementation, including a lack of resources and the need for teacher training to effectively use games in the classroom.

# **3.** Limitations of the Study

Although this study has achieved positive results regarding the application of games in teaching English at Chu Van An Secondary School in Hai Phong, there are still several limitations that need to be acknowledged:

- Limited Sample Size: The study was conducted with a certain number of students and teachers, which may not fully reflect the characteristics of all students and teachers at the school or in other areas. A small sample size may affect the generalizability of the study's results.
- Short Duration of Study: The research was carried out over a relatively short period. This may not be sufficient to assess the long-term impact of game-based learning in teaching. Results may differ if the study were conducted over a longer period.

# **4.** Suggestions for further study

Based on the findings and limitations of this study, we suggest several directions for future research:

1. Expand Sample Size: Future studies should expand the sample size to include more schools and diverse classrooms. This will help enhance the generalizability of the results and provide deeper insights into the impact of GBL on students from different backgrounds.

2. Longer Study Duration: Research should be conducted over a longer period, such as an entire academic year, to assess the long-term effects of GBL on language skill development and sustained student motivation.

3. Teacher Training: Research on how to train teachers to effectively implement GBL in the classroom is essential. Understanding educational methods and strategies to develop gaming skills can contribute to improving teaching effectiveness.

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# APPENDIX

This survey is designed for my graduation report research titled "A Research on Applying Games to Motivate English Study for Students at Chu Van An Secondary School in Hai Phong".

We would appreciate your assistance in completing the following items. Any information you provide is very useful and will be collected for research purposes.

Thank you very much for helping me complete the table in

this survey.

Please tick  $\square$  or write your answer if necessary.

1. How interested are you in learning English through games?

O Very interested

O Somewhat interested

O Neutral

O Not interested

2. How much do you feel your listening, speaking, reading, and writing skills have improved after learning through games?

O A lot

O Somewhat

O No improvement

3. Do you feel that the time spent on game-based learning is appropriate for the amount of knowledge needed to be learned?

O Very appropriate

O Somewhat appropriate

O Not appropriate

4. Has learning through games increased your motivation to study English?

O Yes, very much

O Yes, a little

O No change

O Decreased motivation

5. Have you encountered any difficulties while learning English through games? If so, what were they? (Select all that apply)

O Lack of time to play and study

O Difficulty understanding how to play

O Not suitable for my learning abilities

O Lack of supporting study materials

O No guidance when facing issues

O Other: \_\_\_\_\_

6. Are you satisfied with your English learning results after learning through games?

O Very satisfied

O Somewhat satisfied

O Neutral

O Unsatisfied

7. Do you feel that learning through games has helped you work better with your classmates?

O Yes, a lot

O Somewhat

O No difference

8. In your opinion, should learning through games be widely implemented in school?

**O** Absolutely

**O** Probably

O Not necessary

9. Do you feel that immediate feedback in games helps you learn from your mistakes?

O Yes, definitely

O Sometimes

- ONo
- 10. How much time do you spend on game-based learning each week?

O Less than 1 hour

O 1-3 hours

O 4-6 hours

- O More than 6 hours
- 11. Which learning method do you feel more comfortable with?
  - O Game-based learning
  - O Traditional learning
  - O No preference