

**UNIVERSITY OF EDUCATION, WINNEBA**

**LEARNING THROUGH PLAY: AN EXPERIMENTAL DESIGN OF GAMES  
IN LEARNING ENGLISH GRAMMAR AT THE BASIC LEVEL**

**JOANA ASHARDEY ASHILLEY**



**MASTER OF PHILOSOPHY**

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**A thesis in the Department of Educational Foundations,  
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of the requirements for the award of the degree of  
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## DECLARATION

### STUDENT'S DECLARATION

I, Joana Ashardey Ashilley declare that this thesis, with the exception of quotations and references contained in published works, which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: .....

Date: .....

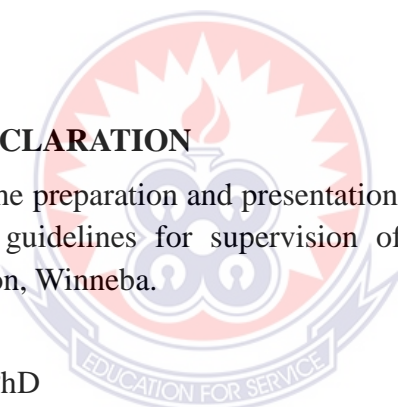
### SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.

Hannah E. Acquaye, PhD

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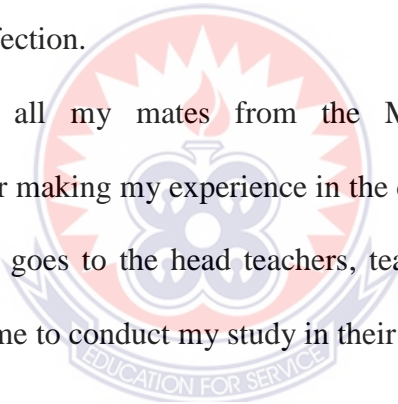


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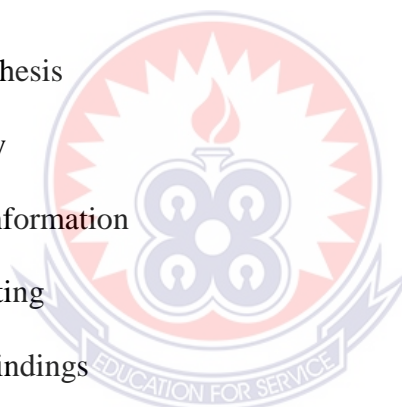


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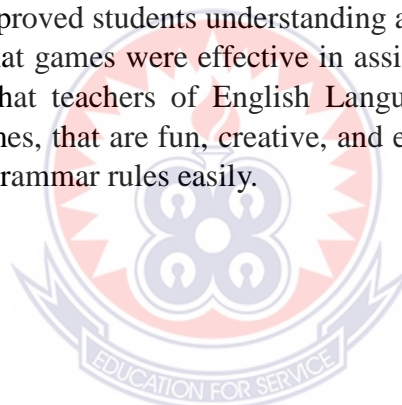
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## ABSTRACT

Grammar acquisition is thought to be critical to language acquisition. However, the traditional approach to delivering vocabulary items and grammar rules appears to be difficult for English as a Second Language (ESL) learners. Additionally, studying grammar is frequently seen as a tedious and arduous task. The situation becomes more difficult when the learners are primary school children and the teaching and learning focus is grammar, an activity often regarded as uninteresting and tedious. An alternative teaching approach, which actively involves learners, whiles learning in fun and creative ways, motivating, challenging, engaging their mental processes, and reducing classroom anxiety and fear, is desired and encouraged for fruitful language teaching and learning process. In this regard, this study's main purpose was to find out the impact of game-based instruction on learners' English grammar acquisition and use. The design chosen for this study is the quasi experimental placed in a positivist paradigm. Data was collected from a sample of 82 Basic (4) four learners, using a simple random sampling technique, through researcher made tests and demographic questionnaire. Data was analyzed using ANCOVA in the Statistical Package for Social Sciences (SPSS). Findings revealed that the use of games in teaching improved students understanding and use of English grammar and as such, concluded that games were effective in assisting learners acquire grammar. It is recommended that teachers of English Language adopt alternative teaching methods, such as games, that are fun, creative, and engaging to teach grammar as it helps learners grasp grammar rules easily.



## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction to the Chapter**

This chapter explores the introduction of the whole research work. The chapter provides a background to the study where the work is grounded on literature. Thereafter, the work provides an argument for why the study is needed in the problem statement. The work then delves into the theoretical framework and the conceptual framework – two areas that allow readers to situate the whole work on the variables at play. This chapter also addresses the purpose of the study, the objectives and research questions. Finally, the work lays out the hypothesis of the study, and ends with an explanation of the stakeholders who may benefit from the results of this work.

#### **1.1 Background to the Study**

In recent years, the integration of educational games has gained significant attention as an innovative approach to enhance the teaching and learning process. By utilizing games as a pedagogical strategy and tool, educators aim to create a more engaging and interactive learning environment, which can potentially improve students' comprehension and retention of grammar concepts.

The English Language plays an important role in the lives of many Ghanaians (Afrifa et al., 2019). It is the only official language of communication and the official medium of instruction in Ghanaian schools. For learners to be able to communicate effectively and proficiently in the English Language, they need to have a good foundation in Grammar (Akowuah et al., 2018). In most languages, the attainment of the basics of grammar is crucial to the general language acquisition. A

person who knows grammar is one who can express himself or herself in what would be considered as acceptable language forms (Hamzah & Dourado, 2010).

The way a communication system works is known as its grammar, and both the sender and the receiver must use grammar to communicate effectively. There can be no communication if there is no grammar. The preceding statement emphasizes the necessity of teaching grammar in basic schools. This means that for effective communication to take place, the message must be able to reach its intended recipient without encountering any obstacles. As a result, in order to accomplish successful communication, the message delivered should be free of grammatical errors that hinder comprehension (Anani, 2017).

In the Ghanaian society, children with English language as their first language fare better academically than students encountering English at the start of school (Taylor, 2016). This is because the latter group must overcome deficiencies in English while simultaneously maintaining academic progress with students already proficient in English, and many do not succeed (Taylor, 2016). The use of a child's first language in school has been found to improve linguistic, cognitive, and academic development (Sun, 2019; Garcia, 2021). However, academics (Pinto, 2019) have criticized the usage of the indigenous Ghanaian language as a means of enhancing educational success.

An examination of students' English proficiency levels in Ghana reveals that there is a problem (Akowuah et al., 2018). Many do not realize the fact that in order to improve their English, they have to learn the basics of grammar which is the foundation of any language and is evident in the other aspects of the language such as writing and speaking.

According to previous studies on the English language (Anani, 2017; Tom-Lawyer & Thomas, 2020), there appears to be a decline in English language standards among student users, and many researchers attribute this perceived problem to a variety of factors, including teacher methodology, students' attitudes, and environmental factors. Anani (2017) attests to the fact that the English Language appears to be important to Ghanaians, and English Language teachers and examiners have consistently expressed concern over the language's declining standard.

He further opines that we are all obligated to intervene, especially English language teachers, despite our own limitations, in order to stop Ghana's English language standard from further deteriorating. Apart from numerous experts' perspectives on the fall, several questions are being raised about the country's declining standards. According to researchers (Dadzie & Bosiwah, 2015; Nugba et al., 2021), some Junior High School students fail their Basic Education Certificate Examination (B.E.C.E) because they are unable to express themselves adequately in writing. This problem is confirmed in the 2019 WAEC BECE Chief Examiners' Report. In a multilingual country like Ghana, the English language acts as an effective communication tool. Any linguistic barrier will obstruct communication.

Studies have revealed that the difficulties in using English as a second language in Ghana are due to the way the language is taught and learnt at all levels of school in the country. For example, studies have shown that some English as a Second Language (ESL) teachers in Ghana do not have the necessary training or qualifications before teaching the subject in schools, colleges, or even universities (Akoto & Afful, 2020). As a result, grammar, and other components of the English second language are frequently neglected in the English second language classroom. Many do attest to the poor quality of English, both spoken and written, of

Ghanaians. Some students at the university level still struggle with English. This is not only caused by the traditional method of teaching but also poor reading habits of learners in general (Akurugu, 2010).

Traditional methods of grammar instruction often rely on rote memorization and repetitive exercises, which may lead to disengagement and limited understanding among students. To address these challenges, educators are increasingly exploring innovative and interactive approaches, such as incorporating educational games into the curriculum.

Traditional teaching and learning process referring to chalk-and-talk has become outdated in lessons. Therefore, the use of interesting and suitable materials along with the various approaches when conducting language games during lessons helps to cater to learners' needs and interests on the subject-matter especially in learning grammar in context (Yacob & Yunus, 2019). Learning grammar is seen as a tedious and laborious process and many teachers approach grammar teaching very seriously making learners lack motivation, interest, and excitement for the subject. This can be averted by the introduction of games into grammar lessons in order to capture learners' attention, motivate them and reinforce their grammar structures.

Using games as a teaching tool offers several potential benefits. Firstly, games create a relaxed and enjoyable learning atmosphere, reducing students' anxiety and fear of making mistakes. This positive emotional state can enhance students' motivation, participation, and willingness to take risks in language learning. Additionally, games provide opportunities for active learning, fostering critical thinking, problem-solving skills, and collaboration among students.

Furthermore, games can effectively contextualize grammar concepts by presenting them in meaningful and authentic contexts. By engaging in gameplay,

students are exposed to English grammar rules and structures in a practical and interactive manner, enabling them to apply their knowledge in real-life situations. This contextualization promotes deeper understanding and application of grammar concepts, which are crucial for effective language use.

Moreover, games offer immediate feedback, allowing students to identify and correct their errors in real-time. This instant feedback mechanism facilitates the identification of areas of improvement, thus enhancing the learning process. Through repeated gameplay, students can reinforce grammar concepts and track their progress, which can further boost their motivation and self-efficacy.

Several studies have shown the positive impact of using games to teach various subjects, including language learning. For example, a study by Tondello et al. (2018) demonstrated that digital game-based learning can enhance student engagement, knowledge acquisition, and motivation in educational contexts. Similarly, a study by Adu-Gyamfi and Larbi (2017) found that the use of board games in teaching English improved students' grammar skills and overall language proficiency.

In the Ghanaian context, limited research has been conducted specifically on using games to teach English grammar in basic schools. Thus, this study aims to fill this gap by exploring the effectiveness of game-based instruction in enhancing students' grammar learning outcomes.

Integrating games into English grammar instruction in Ghanaian basic schools has the potential to address the existing challenges and create a more engaging and effective learning environment. By leveraging the benefits of games, educators can foster active learning, promote contextual understanding, and provide immediate feedback to students. This study aims to contribute to the existing



literature by investigating the impact of game-based instruction on English grammar learning outcomes in Ghanaian basic schools, ultimately aiming to enhance students' language proficiency and educational opportunities.

## **1.2 Statement of the Problem**

English grammar proficiency among students in Ghanaian basic schools has been a persistent concern, as evidenced by the reports from the National Standardized Exam for Basic 4 learners and the Basic Education Certificate Examination (BECE) English Language results. The 2021 basic four standardized exam reports indicated that 50% of learners were below basic proficiency level while the other 50% were made up of Basic, Proficient, and Advanced proficiency levels in English. These reports and assessments indicate that students often struggle with grasping grammar concepts, leading to poor performance and limited language skills. A careful look at the new Ghanaian Basic school English curriculum shows that use of games in teaching is a requirement, however, there is no indication of how and when this should be used in the classroom. Anecdotal reports indicate that teachers are taken through several workshops on how to make practical the new curriculum. Moreover, traditional teaching methods, characterized by rote memorization and repetitive exercises, have failed to adequately address these challenges, resulting in disengaged students and limited understanding of grammar rules. While games provide an opportunity for meeting the philosophical goal of the English curriculum and increasing its relevance as well as student interest in learning the subject, it is not known if teachers make the same connection between the games and teaching and learning of English grammar. It appears, however, that teachers are not intentional about the use of games, or still struggle to use games. To fill this “practical-knowledge gap” (Miles, 2017, pp. 3-4), it is necessary to

demonstrate, empirically, the efficacy of the use of games in teaching English grammar. Thereafter, teachers can be taught to use unique and culturally- appropriate games to help learners understand English grammar because there is empirical support of its efficacy.

Recent research conducted in diverse educational settings has demonstrated the positive impact of game-based learning on student engagement, motivation, and knowledge acquisition (Johnson et al., 2020; O'Sullivan et al., 2020; Adeyemo et al., 2020). A recent study conducted by Chen and Lee (2021) examined the use of games as a teaching method for English grammar. The study employed a mixed-methods approach, combining quantitative data analysis and qualitative observations to gather comprehensive insights. Based on the findings, Chen and Lee (2021) concluded that integrating games into English grammar instruction can be an effective pedagogical approach. Game-based instruction not only enhanced students' grammar knowledge but also fostered a positive learning environment, promoting student engagement and motivation. The interactive and enjoyable nature of games captured students' attention and facilitated active participation, leading to improved learning outcomes. Extant literature has highlighted the potential of using games as an alternative approach to teaching English grammar. There is, however, a need to explore the effectiveness of game-based instruction within a basic school in a predominantly lower socio-economic environment. This population gap (Miles, 2017) will be served by the results of this current study.

To address these gaps, it is essential to investigate the effectiveness of using games as a pedagogical tool for teaching English grammar in Ghanaian basic schools. By examining the impact of game-based instruction on students' grammar learning outcomes, this study aims to determine whether incorporating games can

enhance students' understanding, engagement, and motivation in English grammar learning to support the Standard-based Curriculum statement of the incorporation of games into teaching and learning.

### **1.3 Theoretical Framework**

This study is grounded upon Vygotsky's *Cognitive Development Theory* (Vygotsky, 1966, 1978). (Evaldsson & Corsaro, 1998; Landreth, 2012). The theory contends that cognitive capacities are socially formed and guided. As a result, culture has a role in the formation and development of certain skills including learning, memory, attention, and problem solving. It is believed that culturally specialized tools play an important role in how children organize and think about the world.

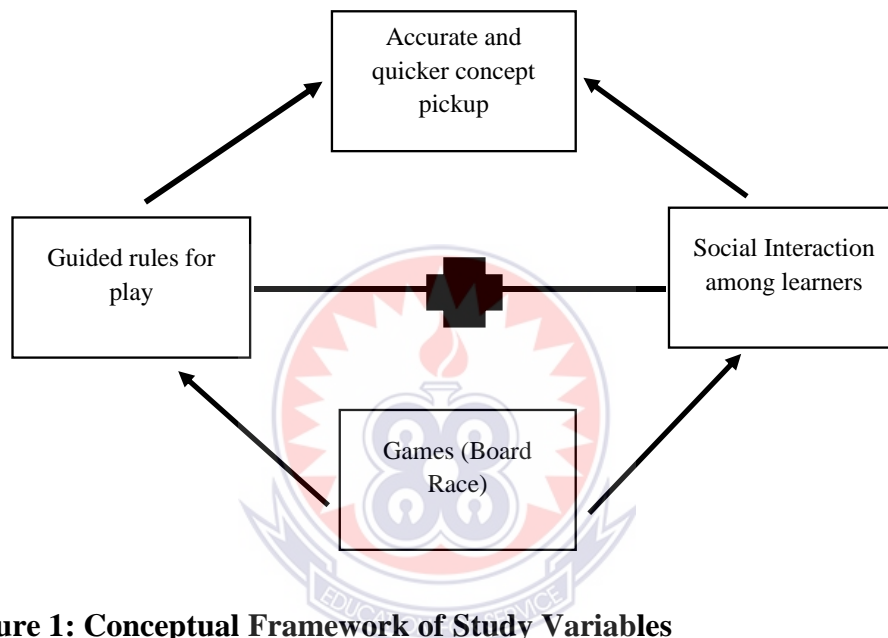
Good games strive to be within a player's zone of proximal development in the context of learning (Vygotsky, 1978). He considered play to be a "leading line" (Vygotsky, 2016 pg. 7) in children's development, believing that one of play's most important functions is to generate a zone of proximal development for the child. Genuine play, which begins at the age of three, is always a symbolic and social activity, according to Vygotsky. Play, especially play with a more capable peer, allows a child to succeed at activities that are a little beyond his or her current abilities because of its social character (Landreth, 2012). Play, according to Vygotsky, allows a child to reach beyond his typical age, above his usual conduct. Vygotsky (1966) sees games as a developmental continuation of play. In this sense, play, as well as games are dependent on mutually accepted rules of procedure in a specific frame, and they require structuring and management.

Games provide a supportive and interactive environment where learners can engage in meaningful language exchanges, receive feedback, and negotiate meaning

collaboratively. Through games, learners can enter their ZPD and receive guidance from peers or teachers, which can lead to enhanced understanding and mastery of English grammar concepts.

#### 1.4 Conceptual Framework

Conceptual framework defines the relevant variables for my study and maps out how they might relate to each other (Figure 1).



**Figure 1: Conceptual Framework of Study Variables**

Vygotsky's cognitive development theory emphasizes the importance of social interactions and cultural tools in cognitive development. When applied to teaching English grammar, incorporating games as instructional strategies aligns with Vygotsky's theory by providing a social and interactive context for language learning. Games facilitate motivation, engagement, social interactions, and cognitive development, ultimately enhancing learners' English grammar proficiency.

When using a game-based approach to teach, the rules guiding the game and the interactions that happen between the learners through the ZPD (Zone of Proximal Development) and MKO (More Knowledgeable Other), helps learners

pick up grammar skills more accurately and much faster. The game used for this study is called Board race, with this game learners are grouped into 8 or more depending on the class size. Each group is to come up with sentences based on the topics treated (Verbs, nouns, adverbs, and adjectives) and each member takes a turn to run to the board and write out their sentences. This activity is timed and the group with the most sentences win. Therefore, the introduction of the games which makes them play an active part in their learning and understanding (will) help them understand and use grammar better.

### **1.5 Purpose of the Study**

With the current concern about diminishing Language competence among Ghanaian students, it is critical to emphasize how the use of games in grammar instruction might help turn things around. As a result, the purpose of this research is to establish how the use of games facilitates the learning of the English grammar among a group of basic school pupils.

### **1.6 Objectives of the Study**

The objectives of the study were to:

1. To assess and compare the performance of learners in basic schools who have undergone game-based instructions for learning English grammar with those who have received traditional teaching.
2. To investigate the impact of learners' home language dominance on their ability to answer grammar questions correctly after introduction to game-based learning.

3. To examine and establish whether there are potential gender-based variations in the effectiveness of the game-based learning approach on English grammar proficiency.

### **1.7 Research Hypothesis**

H01: Learners in basic schools who received game-based instructions in learning English grammar will answer more grammar questions correctly than those who receive teaching as usual.

H02: Learners who speak dominant languages at home will answer more grammar questions correctly than learners who speak non-dominant languages at home after intervention.

H03: There will be a statistically significant difference in the mean score of males than females after the intervention/ at post-test.

### **1.8 Significance of the Study**

The outcome of this study will be essential because it will provide teachers of the English language a variety of ways through which they can use to make teaching and learning fun as well as to enhance learners understanding and use of grammar. This can be done through the appropriate selection of games to use and when to use them to be effective.

The study will contribute to the existing body of knowledge in understanding teaching and learning of English grammar and add to local literature. This study will inform stakeholders and policymakers to enhance teacher knowledge on the use of games for teaching and learning of English grammar through the organization of in-service training and workshops to improve upon practice.

The study would enable curriculum developers realise the importance of games in teaching English grammar and it will guide them in planning and designing the curriculum to reflect upon the use of games that should accompany the pedagogy and content in instruction. This will also cause policy makers to focus on ways through which games can be incorporated into the curriculum, while providing the necessary teaching and learning materials and training of teachers for its implementation.

Lastly, the study would add to already existing literature which is quite few and may inspire other researchers to embark on studies into the use of games in teaching grammar for improved student English competency levels in basic schools across Ghana.

### **1.9 Delimitation**

Delimitations define the boundaries within which the research will be conducted, indicating what will be included and omitted from the study. A study's delimitation establishes the scope and boundaries of the investigation, and this must be well defined for researchers to keep focus, set realistic goals, and give a clear framework for their research.

This study focuses on play-based learning, specifically the use of games in teaching English Grammar at the Basic School. English as a subject was chosen for this study because studies have been conducted in other subjects such as Mathematics and Integrated Science, on play-based learning. This study looked at the following grammar topics at the basic level. (Basic 4): Nouns and Adjectives; Verbs and Adverbs, and Prepositions. Basic 4 pupils were chosen for this study because emphasis on English grammar begins at the Basic 4 level. The study was conducted in the Effutu Municipality of the Central Region of Ghana. This

municipality was chosen for this research because it has a good number of public basic schools and University's Practice Basic Schools. The proximity to the university will make the study and implementation of play-based learning, more especially the use of games in teaching English, easy and effective.





## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction to the Chapter**

This phase of the study is devoted to critically examining the existing literature, which serves as the foundation for establishing the study's necessity and rationale. As such, the conceptual review and empirical reviews were delved into. The conceptual review comprised exploring the concept of games, types of language games and game-based learning, guidelines, reasons and challenges of game-based instruction and learning. This section also looked at type of learners and learning styles. Also, the empirical review focused on modern teaching and learning approaches, second language acquisition and use as well as cultural background on second language acquisition.

#### **2.1 Definition of Games**

Many game definitions include videogames since they were developed after videogames were a big cultural force and a creative enterprise. Because of the popularity of videogames, the people who create these definitions are interested in defining them in ways to include videogames and this has in a way shifted the focus from non-digital games to digital games.

According to Midgley (1974), it is worthwhile to consider the word game as characterized by the need that it meets. She added that a chess player does not want to play just any game; he wants to play chess. Not only is it tricky to come up with a comprehensive definition for game, but it is also true that the same term will mean different things to different individuals at different times. For different people, playing a game has different connotations. Some people will think of a console or

video game, while others will think of Scrabble or similar word game, card games, Oware, Ludo, and so on.

The definition of 'game' is always changing, but for the purposes of this study, I would be focusing specifically at non-digital games. According to Haldfield (1999): “A game is an activity with rules, a goal and an element of fun. Games should be regarded as an integral part of the language syllabus, not as an amusing activity for Friday afternoon or for the end of the term.” This definition emphasizes the value of games in the classroom. It adds to teachers' teaching strategies that games can be used not only as an 'amusing activity,' but also as a method for performing tasks by learners in a fun way. Haldfield (1999) continued to add that games can be employed at all phases of the learning process from controlled to free practice, functioning as a memory aid and repetition drill at one end of the spectrum and as a chance to use the language freely and as a means to an end rather than an end in itself at the other. They can also be used as a diagnostic tool for teachers, who can identify areas of difficulty and take appropriate corrective action.

Haldfield further emphasizes the effective use of games. When it comes to finishing tasks, students are generally lazy. As a result, games are used appropriately in the way that learners are encouraged to participate in the games so that they can enthusiastically and willingly practice or utilize the new language skills they have acquired rather than being forced to complete the tasks. It is more effective because students can play and learn at the same time.

Lee (1991) defines games quite similarly to Haldfield (1999) where he states that: “Games in the strict sense, which have a definite beginning and end, are governed by rules...” (p.3). Similarly, Haldfield (1990) defines games as an activity with rules, a goal and an element of fun. Games are not played in a chaotic

environment. Games contain rules, and it is important that every player understands these regulations prior to the start of the game so that they can play it smoothly without committing any mistakes.

Earlier on in 1990, Greenall had explained games as the term used whenever there is an element of competition between individual students or teams in a language activity. All the above rules are required when there is an element of competition. Furthermore, games are used in this context to encourage students to work together as a team by pushing them to do their best to complete tasks or maybe meet any standards put forth in the games for team spirit.

As a result, games have a wide range of aspects, including rules, competitiveness, relaxation, and learning. The major purpose of using games in the classroom is to assist students in learning more effectively while having fun.

## **2.2 Types of Games**

Games are divided into numerous, frequently overlapping categories. Adventure games, simulation games, competition games, cooperation games, programming games, puzzle games, and business management games are just a few examples (Jacobs & Dempsey, 1993). It is common for a game to belong to more than one category.

In general, an activity must have several basic characteristics in order to be considered a game. The activity is typically a competition of physical or mental abilities and strengths, with participants required to follow a set of rules in order to achieve a goal. A game may contain elements of chance or fantasy. A game involves competing against others, a computer, or oneself. Games can be instructional or non-instructional, interactive or non-interactive, and computer-based or non-computer-based. (Bright & Harvey, 1984; Dempsey et al., 1994; Malone, 1980).

There are various games that can be played to help improve a person's grammar skills. The types of grammar games vary depending on the students' level, the materials available, and the specific grammar being introduced or practiced. The majority of games are either physical or digital.

Physical or traditional games usually include 'hangman,' 'Simon says,' or games that use flashcards or boards to allow players to advance through the game by using various aspects of grammar, such as spelling. Some grammar games will give you a sentence with blanks in certain places, usually indicating the part of speech that goes there, and you can fill in the blanks as you see fit to create strange and humorous sentences.

Digital grammar games, on the other hand, are frequently similar to traditional games but may include aspects of digital technology that reward players for using language to solve problems in new and interesting ways. A digital game, for example, might allow players to battle monsters by spelling words that “damage” the monster based on their length. Some games even present players with problems to solve and allow them to do so by presenting them with objects that match words typed by the player. (Wiesen, 2022)

Hadfield (2003), has also classified games into the following:

- Matching: e.g., matching two words or phrases, matching half-sentences or matching words and pictures
- Ordering: e.g., ordering words to make a sentence, or ordering pictures and words to make a sentence as long as possible
- Completing: e.g., completing incomplete sentences or questions
- Competitions: e.g., see how many sentences you can make, how quickly you can restructure sentences

- Card games and other familiar game types: e.g., bingo, board games, dominoes

Memory games: e.g., seeing how many sentences players can remember.

### **2.3 Language Games and Gaming**

Language games and gaming have emerged as significant areas of study within linguistics, cognitive science, and education. Language games involve the use of language as a form of play or communication, while gaming refers to interactive activities within digital or virtual environments. This literature review aims to explore the theoretical foundations of language games, their applications in language learning, and the potential cognitive benefits associated with gaming. By synthesizing key findings from relevant studies, this review will shed light on the implications for future research and practical applications in these areas.

The concept of language games finds its roots in philosophical and linguistic theories that emphasize the dynamic and context-dependent nature of language. Philosopher Ludwig Wittgenstein's notion of "language games" highlights the social and pragmatic aspects of language use, emphasizing that language is a rule-governed activity embedded in specific contexts (Wittgenstein, 2010). This influential idea has informed subsequent research on language games and gaming.

Language games have proven to be effective pedagogical tools in language learning contexts. Researchers have explored their application to enhance vocabulary acquisition, grammar comprehension, and overall language proficiency. For instance, Han and Wang (2018) developed a digital language game that engaged learners in vocabulary learning through gameplay, resulting in improved vocabulary retention and motivation.

The advent of digital gaming has revolutionized language learning by providing immersive and engaging environments for second language acquisition. Language learning video games, such as “Assassin's Creed: Origins - Discovery Tour” and “Never Alone,” offer players opportunities to explore foreign cultures, interact with virtual characters, and practice language skills (Ryu, 2013). These games leverage the power of gamification and interactivity to enhance language learning outcomes.

Language games and gaming offer numerous cognitive benefits, including improved problem-solving skills, enhanced memory, and increased attentional focus. For example, Boot et al. (2011) demonstrated that action video games can enhance cognitive flexibility and working memory. Language games that require strategic thinking, such as word puzzles and crosswords, have also been associated with improved cognitive performance (Perret et al., 2015).

Language games promote social interaction and collaboration, providing opportunities for the development of communicative competence. Multiplayer online games, such as “World of Warcraft” and “Minecraft,” facilitate communication and cooperation among players from diverse linguistic backgrounds (Peterson, 2018). These virtual environments create spaces for language learners to practice their language skills in authentic social contexts.

Language games and gaming have the potential to significantly impact language learning and cognitive development. By offering interactive and engaging platforms, they enable learners to actively practice language skills, explore cultural contexts, and develop cognitive abilities. The theoretical foundations, including Wittgenstein's concept of language games, inform the design and implementation of effective language games. Future research should further investigate the optimal

integration of language games and gaming in educational settings, explore their long-term impact on language acquisition, and develop innovative approaches to leverage their benefits for diverse learner populations.

### **2.3.1 Reasons for Using Games in Language Teaching**

Games have become an increasingly popular approach in language teaching due to their potential to engage learners, promote active participation, and enhance language learning outcomes. One main reason for using games in language teaching is their ability to enhance motivation and engagement among learners. According to Deci and Ryan's Self-Determination Theory, intrinsic motivation plays a crucial role in fostering effective learning (Deci & Ryan, 2000). Games provide an enjoyable and interactive learning experience that can increase learners' intrinsic motivation and interest in language learning (Miller & Hegelheimer, 2006). Studies have shown that when learners are engaged in game-based activities, they demonstrate higher levels of attention, effort, and persistence in language tasks (Thornbury, 2006).

Games provide opportunities for learners to actively use the target language, promoting language production and communication. By engaging in game-based tasks, learners practice speaking, listening, reading, and writing in meaningful contexts (Hayati & Jalilifar, 2014). Communicative games, such as role-plays or problem-solving tasks, create a communicative need and encourage learners to interact and negotiate meaning with their peers (Jones, 2015). This active use of language supports the development of fluency, accuracy, and communicative competence (Chen, 2017).

Games offer a platform for integrating meaningful contexts and authentic language use into the learning process. Language games often simulate real-life situations, allowing learners to apply their language skills in contextually rich

environments (Thornbury, 2006). This authenticity enhances learners' understanding of cultural nuances, pragmatics, and language functions (Lee & Lee, 2019). For example, simulation games like “The Sims” or “Virtual Business” provide opportunities for learners to engage in realistic scenarios, such as ordering food in a restaurant or negotiating a business deal, facilitating authentic language practice (Peterson, 2013).

Games can be effective tools for vocabulary acquisition and grammar learning. Vocabulary games, such as word puzzles, memory games, or word association activities, offer engaging and repetitive practice, enhancing learners' retention and recall of new vocabulary items (Nation, 2009). Grammar games, such as board games or card games, provide a context for learners to apply grammatical rules in a meaningful way, reinforcing their understanding and application of grammar structures (Cook, 2000). Research has shown that the incorporation of games into language teaching can lead to improved vocabulary knowledge and grammar proficiency (Karimi & Saeidi, 2016; Ruiz de Zarobe & Jiménez Catalán, 2009).

Games stimulate critical thinking and problem-solving skills, which are valuable for language learners. Many language games require learners to analyze situations, make decisions, and solve linguistic or communicative challenges (Miller & Hegelheimer, 2006). By engaging in game-based problem-solving activities, learners develop higher-order thinking skills, such as logical reasoning, creativity, and strategic planning (Gros, 2007). These skills not only benefit language learning but also transfer to other academic and real-life contexts (Rankin, 2017).

The use of games in language teaching offers various benefits that contribute to effective language learning. Games enhance motivation and engagement, promote



language production and communication, integrate meaningful contexts and authentic language use, facilitate vocabulary acquisition and grammar learning, and develop critical thinking and problem-solving skills. These advantages highlight the pedagogical value of incorporating games into language instruction. Educators and curriculum designers should consider leveraging the potential of games to create dynamic and engaging learning environments that foster language proficiency and learner motivation.

### **2.3.2 Disadvantages of Using Language Games in the Classroom**

While language games have gained recognition as effective tools for language teaching, it is essential to consider their potential disadvantages and limitations. This literature review explores the drawbacks associated with the use of language games in the classroom. Drawing on research from educational and pedagogical perspectives, this review highlights concerns and challenges that educators should be mindful of when incorporating games into language instruction.

One disadvantage of language games is the potential deviation from authentic language use. Games often create simplified or artificial language contexts that may not accurately reflect real-world communication (Davies, 2011). This limitation can result in learners being exposed to contrived or unnatural language patterns, potentially hindering their ability to apply language skills effectively in real-life situations.

Some language games foster a competitive atmosphere, where learners focus more on winning rather than on meaningful language use (Kankaanranta & Nevgi, 2010). Excessive competitiveness can lead to anxiety, discouragement, or a sense of exclusion among learners who may not perform as well as their peers (Johnson &

Johnson, 1989). In such cases, the potential benefits of collaboration and cooperation may be overshadowed by the negative effects of excessive competition.

Implementing language games in the classroom often requires dedicating a significant amount of time to game-related activities. While games can be engaging, they may lead to time constraints that limit opportunities for in-depth language learning (Cameron, 2001). Teachers may find it challenging to strike a balance between engaging game play and ensuring comprehensive language instruction that covers various linguistic skills and aspects.

Some language games involve simplifying or isolating specific language features, such as vocabulary or grammar items, for the sake of game mechanics (Lin, 2017). This oversimplification may lead to a fragmented understanding of the language, overlooking the complexities and nuances of authentic language use. Learners may struggle to transfer the isolated knowledge gained from games to real-life communication settings (Kumaravadivelu, 2012).

Language games are often designed for whole-class activities, which may not cater to the diverse needs and abilities of individual learners (Hedge, 2000). Some learners may require additional support, while others may be more advanced in their language proficiency. The standardized nature of games can pose challenges in terms of differentiating instruction and providing personalized learning experiences for each student.

When language games are not properly aligned with learning objectives, they may result in superficial learning outcomes (Crookall & Oxford, 1990). Learners may focus primarily on game-related tasks and strategies, neglecting the deeper engagement with language structures, meanings, and functions. Without explicit

connections to broader language learning goals, games can become mere distractions rather than meaningful learning experiences.

While language games offer numerous benefits for language teaching, it is essential to recognize their potential disadvantages. Educators should be cautious in their selection and implementation of language games, ensuring that they align with authentic language use, avoid excessive competitiveness, allow for comprehensive instruction, avoid oversimplification, cater to individual learner needs, and promote deep learning outcomes. By being mindful of these potential drawbacks, educators can effectively navigate the integration of language games in the classroom, optimizing their pedagogical value.

### **2.3.3 Using Games Effectively in the Classroom: Guidelines and Best**

#### **Practices**

Incorporating games into language teaching can be highly beneficial for engaging learners and enhancing language learning outcomes. However, to ensure the effective use of games in the classroom, it is important to follow specific guidelines and best practices. One crucial guideline is to align the selection and design of games with specific learning objectives (Babaei & Derakhshan, 2021). Games should be chosen or developed to target the linguistic skills, vocabulary, grammar, or communicative functions that align with the curriculum and the needs of the learners. By aligning games with learning objectives, educators ensure that game-based activities directly contribute to language development.

Clear instructions and guidelines are essential for effective game implementation (Miller & Hegelheimer, 2006). Before starting a game, educators should explain the rules, objectives, and procedures to ensure that learners understand how to play. Clear instructions help maintain focus, minimize confusion,

and create a supportive learning environment where learners can fully engage in the game-based activities.

Promoting collaboration and communication among learners is a key guideline for effective game-based language instruction (Rankin, Gold, & Gooch, 2017). Games that encourage interaction and teamwork provide opportunities for learners to practice language skills in authentic communicative contexts. Educators can design games that require cooperation, negotiation, and the exchange of ideas to foster meaningful language use and develop interpersonal skills.

Scaffolding learning and providing timely feedback are important guidelines for optimizing the educational value of games (Thornbury, 2006). Educators can provide support and guidance during game-based activities to ensure learners' comprehension, engagement, and language development. Additionally, providing feedback on learners' performance and language use within the game context helps them understand their strengths and areas for improvement.

Encouraging reflection and metacognitive skills is a guideline that enhances the effectiveness of game-based language learning (Wang, 2018). After playing a game, educators can facilitate discussions or reflective activities that allow learners to analyze their strategies, language choices, and learning outcomes. This metacognitive reflection promotes awareness of effective language learning strategies and helps learners transfer their game-based experiences to real-life language use.

Striking a balance between fun and learning is crucial for effective game-based language instruction (Peterson, 2018). While games should be enjoyable and engaging, they should also provide meaningful language learning opportunities. Educators should select games that offer both entertainment value and pedagogical

relevance, ensuring that learners are motivated and actively engaged in language-focused tasks.

When used effectively, games can be powerful tools for language instruction, promoting learner engagement, communication, and language development. By following these guidelines, educators can harness the educational potential of games in the classroom. Aligning games with learning objectives, providing clear instructions, fostering collaboration, scaffolding learning, promoting reflection, and balancing fun and learning are key considerations for using games effectively. These guidelines enhance the pedagogical value of games, leading to more engaging and impactful language learning experiences.

#### **2.3.4 Challenges of Using Games in the Classroom**

The use of games in the language classroom has gained recognition as an effective pedagogical tool. However, educators encounter various challenges when incorporating games into their instructional practices. One significant challenge is the limited time available within the curriculum to incorporate game-based activities (Prensky, 2012). Traditional curricula often prioritize content coverage and assessment, leaving little room for extended game play. Educators face the challenge of finding a balance between fulfilling curricular requirements and allocating sufficient time for meaningful game-based language learning experiences.

The integration of digital games into language instruction can be hindered by technological limitations and access issues (Johnson, 2019). Not all classrooms have access to the necessary technology or reliable internet connections, making it difficult to implement digital game-based activities. Additionally, educators need training and support to effectively utilize educational gaming technologies, further adding to the challenge.

Choosing appropriate games that align with specific learning objectives and student needs can be a challenge (Squire, 2006). Games vary in terms of their complexity, content, and suitability for different proficiency levels. Educators must carefully select or adapt games to ensure they address the targeted language skills and engage learners effectively. This requires a thorough understanding of the game mechanics and the ability to align them with instructional goals.

Aligning game-based language learning with assessment practices poses a challenge for educators (Hsu, Wang, & Comac, 2020). Traditional assessment methods may not easily accommodate the diverse skills and outcomes fostered by game-based activities. Educators need to explore alternative assessment strategies that capture the language development and achievements resulting from game-based instruction, including formative assessments that evaluate process and progress.

Effective implementation of games in the classroom requires appropriate classroom management strategies (Miller & Hegelheimer, 2006). Managing group dynamics, ensuring equitable participation, and maintaining focus can be challenging during game-based activities. Educators must establish clear rules and procedures, anticipate potential disruptions, and provide scaffolding to support learners' engagement and understanding.

Integrating games into a coherent pedagogical framework poses challenges for educators (Klopfer, Osterweil, & Salen, 2009). Games should not be isolated activities but should be purposefully integrated into the broader language curriculum. Ensuring alignment between game-based instruction and other instructional components, such as grammar or vocabulary lessons, can be a complex task that requires careful planning and sequencing.

While games offer immense potential for language learning, educators encounter challenges when incorporating them into the classroom. Time constraints, technological limitations, game selection, assessment alignment, classroom management, and pedagogical integration are among the key challenges faced. By acknowledging these challenges, educators can develop strategies to overcome them and leverage the benefits of game-based language instruction. Further research and professional development are needed to provide educators with the necessary support and resources to effectively address these challenges and harness the full potential of games in language education.

#### **2.4 Types of Learners and Learning Styles**

With a variety of educational and cultural backgrounds, personalities, and learning experiences, everyone approaches learning a foreign language differently, resulting in varying degrees of success. The many favoured strategies are all referred to as “learning styles.” (Xu 2011). Various terms have been used in literature such as learning style, cognitive styles, sensory preference, and personality types. Some of these names have been used interchangeably in some cases, while others have been distinguished. (Cassidy, 2004).

The term “learning style” originates in general psychology. Ellis (2005) defines learning style as “the distinctive manner in which individuals approach problem-solving.” Ellis cites Keefe's (1979) definition of learning style as “the distinctive cognitive, affective, and physiological characteristics that serve as generally stable indications of how learners perceive, interact with, and respond to the learning environment.” Learning style is a consistent way of dealing with things that represents the fundamental causes of behavior.

Cornett defines learning style as “overall patterns that will give general direction to learning behavior,” whereas Dunn and Griggs define learning style as “a biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for others” (Xu, 2011).

A summary of shared characteristics from the above definitions of learning styles is as follows: learning style is concerned with individual learners; learning style is the methods of learning; learning style is relatively consistent or stable for individual learners; learning style is the preferred method of learning for an individual learner.

Learning style and learning method are two concepts that can be confused. We can distinguish learning style from learning strategy to clarify its meaning. One of the individual learner differences is the former. Individual learner differences, such as learning style, “together with situational considerations,” according to Ellis (2005), “influence learners' choice of learning tactics.” “Language learning styles and tactics are among the primary aspects that help determine how and how well our pupils learn a second language,” according to Oxford. He describes learning strategies as “particular acts, behaviors, steps, or approaches” and refers to learning style as the “general approach” (Oxford, 2001). “When a learner consciously chooses strategies that fit his or her learning style..., these strategies become a useful toolkit for active, conscious, and purposeful self-regulation of learning,” he adds. (Oxford, 2001).

According to Xu (2011), whatever the relationship between learning style and learning strategy is, it is acceptable to say that a learner's learning style can determine his learning strategy choice. There is also a mismatch between learning



approach and learning style. A good fit between learning approach and learning style might produce beneficial results.

According to Awla (2014), there are mainly three types of learning styles: cognitive, personality (psychology), and sensory. “Cognitive learning styles include analytical/global, field dependent/field independent, impulsive/reflective, Kolb's model of learning styles, and Ehrman and Leavers' construct.” Personality learning styles are classified into extroverted/introverted, random-intuitive/concrete sequential, and closure-oriented/open oriented, whilst sensory learning styles are classified into visual, tactile/kinesthetic, and auditory (Dornyei, 2005; Oxford, 2001).

It is assumed that learners learn more effectively if their learning styles correspond to the format of their education. A visual learner, for example, may learn better when information is presented to him/her graphically. This method is known as the “learning hypothesis,” or, in a more recent version, the “meshing hypothesis” or “matching hypothesis” (Pashler et al, 2009). A mismatch, on the other hand, may have a detrimental impact on the learners. Awla (2014)

Awla, 2014 reviewed related literature in learning hypothesis or matching hypothesis and in the discussions, some of the studies conducted, (Spoon & Schell 1998; Massa & Mayer, 2006; Cook et al., 2009; Constantinidou & Baker, 2002) where teachers were made to alter their teaching styles to match the learning styles of the learners found no significant difference between the achievement levels of the participants who received instruction in their learning styles and as such did not provide support for the learning or matching hypothesis.

However, in other studies that were reviewed, (Sternberg et al., 1999; Peacock 2001; Naimie et al 2010; and Tuan 2011) significant differences were found

to support the matching hypothesis and through these studies, it was realized that the multiple teaching strategies used by teachers to cater for the learning styles of their learners encouraged style stretching by some learners and teachers i.e., adopting new teaching and learning styles. Awla 2014 concluded that in the lives of students, learning styles are really important. Students will be able to integrate their learning style into their learning process after they have identified it. As a result, learning will be more pleasurable, quicker and more efficient. Furthermore, teachers should try to tailor their teaching approaches to the learning styles of their students.

## **2.5 Overview of Grammar Teaching Approaches and Learning Processes**

In teaching grammar there are two approaches that can be applied: the deductive approach and the inductive approach. The deductive approach is based on deductive reasoning, in which the concept progresses from broad to specific. The rules, patterns, and principles are provided first, followed by instances. The rule-driven approach is another name for the deductive approach. The Grammar Translation Approach is the most suitable method for this deductive teaching, in which grammar teaching is often started by an explanation (mainly in the learner's home tongue) about the grammar points. (Silvia, 2004).

Following this, practice exercises involving translation to/from the target language are conducted. This practice focuses solely on reading and writing, with little emphasis on speaking and pronunciation. A teacher must be fluent in both the learners' mother tongue and the target language to use this approach. This is evidently inapplicable to multilingual classes. (Silvia, 2004)

The following are some possible activities in the deductive approach:

- a) rule-explanation
- b) translation

- c) doing worksheet
- d) self-study grammar

An inductive approach, on the other hand, begins with certain examples from which a rule is drawn. In grammar instruction, teachers introduce examples first, then generalize rules from the given instances. Inductive grammar learning is often applied in teaching native English speakers who can create grammatically accurate phrases but do not understand the rules that underpin them. In English instruction, the inductive approach is frequently associated with the Direct Method and the Natural Approach. (Silvia, 2004). In both methods, grammar is presented in such way the learners experience it. “In Direct method, therefore, the rules of the language are supposedly acquired out of the experience of the understanding and repeating examples which have been systematically graded for difficulty and put into a clear context” (Thornbury, 2000).

A deductive approach is based on top-down theory, in which the presentation and explanation of grammatical principles takes precedence over teaching. The language is taught from the whole to the parts so that learners first understand the grammar rules and structures. They next look at the examples offered by their teacher before starting to create their own (Anani, 2017).

The inductive approach, on the other hand, is based on bottom-up theory, which acknowledges the concept that language learners tend to focus on bits rather than the entire. As a result, the educational process starts with a text, audio, or visual in context. Then, students’ study through the content to discover the rules for themselves. Finally, they provide their own examples (Thornbury, 2000). Anani (2017), opines that, the deductive approach is more teacher-centred while the inductive approach is more student-centred.

Widodo (2006) is of the view that, certain structures determine whether grammatical rules are taught inductively or deductively, as some are more conducive to a deductive method while others can be learned quite well inductively. As a result, depending on the learner's cognitive style and the linguistic structure offered, both deductive and inductive presentations can be used successfully. Regardless of whether a teacher takes a deductive or an inductive approach, he or she should keep in mind that language learning, especially in the context of English as a Foreign Language (e.g., grammar), is a largely conscious process that involves formal exposure to rules of syntax and semantics followed by specific applications of the rule, with corrective and encouraging feedback reinforcing correct usage and discouraging incorrect usage.

For most English teachers, the objective of teaching grammar is to help students internalize language structures/rules that are presented in such a way that they may be used for both written and spoken communication (Ellis, 2002). According to Ellis (2002), the priority of teaching grammar is to aid learners in internalizing the structures/rules of language, taught in such a way that they can be used for both written and spoken communication, and there is a need for practice and consciousness-raising in doing so.

Widodo (2006) states that, it is generally accepted that practice can improve accuracy and fluency. In this aspect, accuracy is concerned with the correct use of language (for example, rules of language). This can be accomplished, for example, by controlled and semi-controlled activities or grammar practice. After mastering the rules of language, learners are expected to apply the rules of language in the form of spoken or written language. It is important to remember that accuracy and fluency are linked. Ellis (2002) defines consciousness-raising as an attempt to provide

learners with an understanding of a specific grammatical feature, to develop declarative (describing a grammar rule and applying it in pattern practice drills) rather than procedural (applying a grammar rule in communication) knowledge of it.

In brief, learners are needed to identify a certain characteristic of language (that is, sentence patterns) but are not required to generate or express the specific phrase patterns taught.

As such, practice is aimed at acquiring implicit understanding of a grammatical structure. That is the type of tacit knowledge required for effortlessly implementing the structure for communication. Consciousness-raising is intended to stimulate the development of explicit knowledge: the type of intellectual information that we can acquire about any subject (Ellis, 2002).

There are two basic processes that might occur during the grammar learning process: explicit and implicit grammatical knowledge. The term explicit grammar knowledge refers to conscious awareness of grammatical forms and their meaning. (Purpura, 2004). This understanding helps in the intake and development of implicit language and is used to monitor language output.

Explicit knowledge is usually obtained slowly through controlled processing; however, it can be automated to some extent. According to DeKeyser (1995), this 'explicit' grammatical teaching includes an explanation of the rule or a request to focus on a grammatical aspect. Instructions can be given deductively, in which learners are taught principles and then asked to apply them in practice, or inductively, in which learners are presented with instances first, then asked to develop rules and make generalizations.

Widodo (2006) uses Ahmad as an example of someone who understands the rules of the present tense and can explain how present tense sentences look like (he

has explicit grammatical knowledge about simple present tense). However, despite his ability to explain deductively from present tense rules to examples, he (Ahmad) frequently makes mistakes when speaking and writing.

Implicit grammatical knowledge, on the other hand, is defined as “language information that is typically manifest in some sort of naturally occurring language activity such as conversation” (Ellis, 2001). According to Brown (2000), “Implicit knowledge involves deliberate awareness and intention.” This process is frequently unconscious and fast to access. According to DeKeyser (1995), implicit grammatical teaching does not include any explanation of rule presentation or a request to concentrate on form in the input. It occurs when there is “no effort to learn and no knowledge of what has been learnt.” (Brown, 2000). Widodo (2006) uses the example of Jack, who can talk and write in the simple present tense but cannot explain how present tense sentences should be written. He is unaware of the grammatical rule underlying it. Generally, second or foreign language learners are taught explicit grammatical knowledge, whereas native language learners learn implicit grammatical knowledge.

## **2.6 Play and Cognitive Development**

In games, play is an essential activity. Play has long been recognized as important in cognitive development and learning by psychologists. Play, for example, was described by Piaget (1962) as being integral to and evolving with children's stages of cognitive development. According to Piaget, as children progress through different developmental stages, their play becomes more abstract, symbolic, and social. (Plass, Homer, & Kinzer (2015)

Play is thought to help children's cognitive development by activating their schemas in ways that allow them to transcend their immediate reality. A child, for

example, can pretend, or “act as if,” an eraser is a car while fully aware that it is not. This type of play enables children to remember multiple representations of the same object, a skill required for the development of symbolic thinking (DeLoache, 1987), one of the most important early childhood developments.

The ability to hold multiple, even contradictory, representations of reality in mind underpins key later developments such as the development of a theory of mind (Astington, Harris, & Olson, 1990) and emergent literacy and numeracy (Homer & Hayward, 2008). According to Plass et. al (2015), this understanding of the role of play in children's cognitive development has informed our understanding of educational games (Hodent, 2014), but there has also been a lot of interest in how video games shape cognitive development and learning.

Loftus and Loftus (1983) focused on players' motivations in their book on the psychology of video games, exploring what makes video games “fun.” Loftus and Loftus, relying heavily on behaviourist theories, pointed out that in video games, rewards or successes typically occur only infrequently, which corresponds to an intermittent reinforcement schedule—the reinforcement schedule that produces the highest response rate.

Loftus and Loftus also cited a study demonstrating that good games are neither too easy, resulting in boredom for players, who then quit playing, nor too difficult, resulting in frustration for players, who then quit playing. Good games strive for the “sweet spot,” where players can succeed but only after some effort, causing what has been described as a state of “flow” (Csikszentmihalyi, 1990). Good games aim to be within a player's zone of proximal development in the context of learning.

The concept of a zone of proximal development is derived from Vygotsky (1978), who also identified play as a “leading factor” in children's development and believed that one of the most important roles of play is to create a zone of proximal development for the child. According to Vygotsky, genuine play, which begins around the age of three, is always a symbolic and social activity (Nicolopoulou, 1993).

Play, particularly play with an adult or more capable peer, allows a child to succeed at things that are a little beyond his or her current ability, in part because of its social nature. According to Vygotsky, play enables the child to achieve “beyond his average age, above his daily behavior; in play, it is as if he were a head taller”. This statement, made nearly 40 years ago, we believe, applies to well-designed games of all types, including the digital games that so many people play today. Plass et. al (2015).

## **2.7 Modern Teaching and Learning Approaches**

Modern teaching and learning approaches have gained prominence in response to changing educational landscapes and technological advancements. This section examines key concepts and strategies related to modern teaching and learning approaches, focusing on project-based learning (PBL), the flipped classroom, collaborative learning, technology-enhanced learning, inquiry-based learning, and play-based learning. By exploring the benefits and potential challenges associated with these approaches, this review sheds light on their effectiveness in contemporary educational settings.

Project-Based Learning is a student-centered approach that emphasizes active engagement, collaboration, and real-world problem-solving (Thomas, 2000). PBL involves learners working on complex, authentic projects that require critical



thinking, research, and application of knowledge. Research indicates that PBL promotes deeper learning, enhances motivation, and develops essential skills such as teamwork and communication (Bell, 2010; Hung, 2015).

The Flipped Classroom approach involves reversing the traditional instructional model, where students engage with instructional content outside the classroom and use class time for active learning and application (Bergmann & Sams, 2012). Learners access pre-recorded lectures or online resources at their own pace, allowing for individualized learning. In-class activities focus on discussions, problem-solving, and hands-on tasks. Studies suggest that the Flipped Classroom approach promotes learner engagement, improves learning outcomes, and encourages self-directed learning (Mazur, 1997; Strayer, 2012).

Collaborative Learning emphasizes cooperative interactions among learners, fostering shared understanding and knowledge construction (Johnson & Johnson, 1999). It involves learners working together on tasks, discussions, and projects, promoting active participation, social interaction, and the development of interpersonal skills. Research suggests that collaborative learning enhances critical thinking, problem-solving, and communication skills while also promoting positive social relationships and a sense of belonging (Dillenbourg, 1999; Slavin, 1996).

Technology-Enhanced Learning refers to the integration of digital technologies into instructional practices to enhance teaching and learning experiences (Means et al., 2010). It encompasses various tools and platforms such as online resources, simulations, virtual reality, and learning management systems. Research indicates that technology-enhanced learning can improve learner engagement, facilitate personalized learning, and provide access to a wide range of

resources and collaborative opportunities (Lai & Bower, 2019; Pimmer, Mateescu, & Gröhbiel, 2016).

Inquiry-Based Learning emphasizes learners' active exploration, investigation, and discovery of knowledge through questioning, research, and experimentation (Krajcik et al., 2014). It fosters critical thinking, problem-solving, and independent learning skills. Inquiry-based learning can enhance learner motivation, engagement, and conceptual understanding by allowing learners to construct their own knowledge (Bell et al., 2005; Hung, 2009).

Play-based learning is an approach that integrates play as a central element in the learning process. Play is seen as a natural and meaningful activity for children and can be harnessed to promote learning across various domains (Hirsh-Pasek et al., 2009). Play-based learning environments provide opportunities for children to explore, experiment, and engage in imaginative and social interactions. Research suggests that play-based learning supports cognitive, social, emotional, and physical development, fostering creativity, problem-solving, and communication skills (Bodrova & Leong, 2005; Hirsh-Pasek et al., 2015).

Modern teaching and learning approaches, such as Project-Based Learning, the Flipped Classroom, Collaborative Learning, Technology-Enhanced Learning, Inquiry-Based Learning, and Play-Based Learning, offer valuable strategies to enhance educational experiences and outcomes. These approaches promote active engagement, critical thinking, collaboration, and the integration of technology and play into the learning process. However, successful implementation requires careful planning, support, and adaptation to specific contexts. Further research and professional development are needed to explore the optimal use of these approaches

and address potential challenges, ensuring their effective implementation in diverse educational settings.

## **2.8 Game-Based Learning**

The majority of definitions of game-based learning emphasize that it is a type of game play with specific learning outcomes (Shaffer, Halverson, Squire, & Gee, 2005). It is common to assume that the game is digital, but this is not always the case. There are numerous educational games available that do not necessitate the use of a computer host. Non-digital game-based learning has several advantages over digital game-based learning, including lower administrative costs, fewer prerequisite skills, and opportunities for enhanced social interaction. As a result, it places much lighter burdens on teachers and students in terms of resourcing, skill development, and so on. (Landers, 2014).

According to Stenros (2017), the definition of gamification varies widely, but one of its distinguishing features is the use of game elements, such as incentive systems, to motivate players to engage in a task that they would otherwise find unappealing. Similarly, there is an ongoing debate among academics about the precise definition of a game, and especially what is not a game (Salen & Zimmerman, 2005). A game, according to one definition, is “a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome” (Salen & Zimmerman, 2005).

Consider the gamification of math homework, which could involve rewarding students with points and stars for completing existing activities that they find boring. Game-based learning of the same math topic, on the other hand, would involve redesigning the homework activities, using artificial conflict and rules of play, to make them more interesting and engaging. Even if the debate over how

games are defined cannot be resolved here, this may not be a problem because play—the essential activity in games—has long been regarded as a critical component in human development (Plass et. al, 2015).

Game-based learning strikes a careful balance between classroom instruction and instructional gameplay. Teachers introduce new concepts to students and demonstrate how they operate. The topics are then practiced by pupils through games. Teachers also add educational activities into their classes, which can assist students in refreshing old concepts or solidifying new ones, either independently or collaboratively.

Teachers may build interesting learning environments that boost student engagement by harnessing today's kids' intimate knowledge of game play (Nisbet, 2021).

## **2.9 Second Language Acquisition and Use**

Second language acquisition (SLA) is a complex process involving the learning and use of a language other than one's native tongue. This section examines key studies and research on SLA, focusing on various factors that influence language acquisition, the role of input and interaction, the importance of context, and the effects of individual differences.

Several factors influence the process of SLA, including age, motivation, aptitude, and language learning strategies. Young learners tend to acquire languages more easily due to their brain plasticity and cognitive flexibility (Hartshorn et al., 2017). Motivation plays a vital role in language acquisition, as learners with high motivation are more likely to engage actively in learning activities and persist in their language learning efforts (Dörnyei & Ushioda, 2019). Aptitude refers to individual differences in language learning abilities, such as phonetic coding ability

and grammatical sensitivity (Robinson, 2018). Effective language learning strategies, such as vocabulary learning techniques and exposure to authentic language input, can enhance SLA outcomes (Kartchava & Ammar, 2018).

Input and interaction play crucial roles in SLA. Krashen's Input Hypothesis suggests that comprehensible input, i.e., language that learners understand with the help of context and other linguistic cues, is essential for language acquisition (Krashen, 2018). Learners require exposure to meaningful and authentic language input to develop their linguistic competence. Interaction, both with native speakers and other learners, provides opportunities for negotiation of meaning, language practice, and feedback (Gass & Mackey, 2015). Research has shown that interactive activities, such as pair work and group discussions, facilitate language acquisition by promoting communication and language production (Marian & Shook, 2018).

Contextual factors play a significant role in SLA. Sociocultural contexts, such as immersion environments and language communities, provide rich linguistic input and cultural exposure, facilitating language learning (Lantolf & Thorne, 2018). The context of language use, including communicative tasks and real-life situations, enhances learners' motivation and engagement (DeKeyser, 2018). Classroom contexts that promote meaningful interactions, authentic materials, and opportunities for language use contribute to SLA outcomes (Nunan, 2018).

Individual differences, such as cognitive abilities, personality traits, and learner strategies, impact SLA. Working memory capacity influences learners' ability to process and retain linguistic information (Skehan, 2018). Learners with different personality traits, such as extroversion and openness to experience, may demonstrate varying levels of willingness to communicate and engage in language learning activities (MacIntyre et al., 2019). Learner strategies, such as metacognitive

awareness and self-regulation, play a crucial role in managing and monitoring language learning processes (Oxford, 2017).

Second language acquisition is a multifaceted process influenced by various factors. Age, motivation, aptitude, and language learning strategies contribute to SLA outcomes. Comprehensible input, interaction, and contextual factors are essential for language acquisition. Individual differences, such as cognitive abilities, personality traits, and learner strategies, also impact SLA. Understanding these factors can inform language teaching practices and help create effective instructional approaches that support learners in their language acquisition journey.

### **2.10 The Role of Cultural Background in Second Language Acquisition**

The influence of cultural background on second language acquisition (SLA) has been widely studied and recognized as a crucial factor in learners' language development. Cultural factors significantly influence the selection and utilization of language learning strategies. Learners' cultural backgrounds shape their preferences for specific learning strategies and their perceptions of effective language learning (Jiang, 2016). For example, learners from collectivist cultures may prioritize collaborative learning and group interactions, while learners from individualistic cultures may emphasize individual study and self-directed learning (Zhang, 2013). Understanding learners' cultural backgrounds can help educators tailor instructional approaches and provide appropriate learning opportunities.

Cultural background plays a vital role in the development of intercultural competence, which involves the ability to navigate and communicate effectively in multicultural contexts. Language learners with diverse cultural backgrounds bring unique perspectives and experiences to the SLA process (Byram, 2016). Research suggests that exposure to different cultural perspectives can enhance learners'

intercultural sensitivity, empathy, and communicative competence (Fantini, 2016). Integrating cultural content and fostering intercultural interactions in language classrooms can promote learners' intercultural understanding and adaptability.

Cultural background also shapes learners' identity formation in the SLA context. Language learners negotiate their identities as they navigate between their native culture and the target language culture (Norton, 2013). Cultural identity influences learners' language choices, motivations, and levels of engagement in the language learning process (Norton & Toohey, 2011). Learners' cultural backgrounds contribute to the construction of their social, ethnic, and linguistic identities, influencing their attitudes and behaviors towards the target language and its speakers (Duff, 2016). Recognizing and validating learners' cultural identities can promote positive learning experiences and foster a supportive learning environment.

The role of cultural background in SLA is significant and multifaceted. Cultural factors influence learners' language learning strategies, intercultural competence development, and identity formation. Recognizing and integrating learners' cultural backgrounds into language instruction can enhance their language learning experiences, promote intercultural understanding, and support their identity development. Educators and practitioners should consider the diverse cultural backgrounds of learners and adopt culturally responsive approaches to create inclusive and effective language learning environments.

## **2.11 Chapter Summary**

This chapter explored the dynamic intersection of language education, games, and modern teaching approaches. Beginning with a nuanced definition of games, the review progresses through an in-depth analysis of language games and their educational potential. It thoroughly examines the reasons for incorporating

games in language teaching, acknowledging their benefits while critically assessing potential disadvantages.

The chapter offers practical insights by presenting guidelines and best practices for using games effectively in the classroom, addressing challenges, and considering the diverse learning styles of students. It seamlessly transitions into a broader discussion on grammar teaching approaches, learning processes, and the role of play in cognitive development within the context of language education.

Acknowledging the evolving landscape of teaching and learning, the chapter explores modern approaches, emphasizing the integration of technology, communicative language teaching, and learner-centered strategies. It places particular emphasis on game-based learning, both digital and non-digital, as a key component of contemporary language instruction.

The discussion then delves into the intricate dynamics of second language acquisition, considering the impact of games on motivation, language transfer, and the development of communicative competence. It culminates in a thoughtful exploration of the often-overlooked influence of cultural background on language acquisition, emphasizing the role of games as cultural bridges in fostering intercultural competence.

In conclusion, the chapter synthesizes the key findings and insights garnered from the extensive literature review. It underlines the importance of a balanced and informed approach to integrating games and modern teaching methods in language education. By equipping educators with practical guidelines, addressing challenges, and emphasizing the cultural dimension of language acquisition, the chapter contributes to a holistic understanding of effective language teaching practices in the 21st century.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Overview

The purpose of this chapter is to articulate the research design used for the study. The chapter addresses the philosophical underpinnings of the whole work. Specifically, the chapter will explain the ontological and epistemological stance as they connect to the whole work. Additionally, the chapter will discuss the population, the sample and sampling procedure, the instruments used for data collection, data collection and analysis procedure and the ethical considerations made during this study.

#### 3.1 Philosophical Paradigm

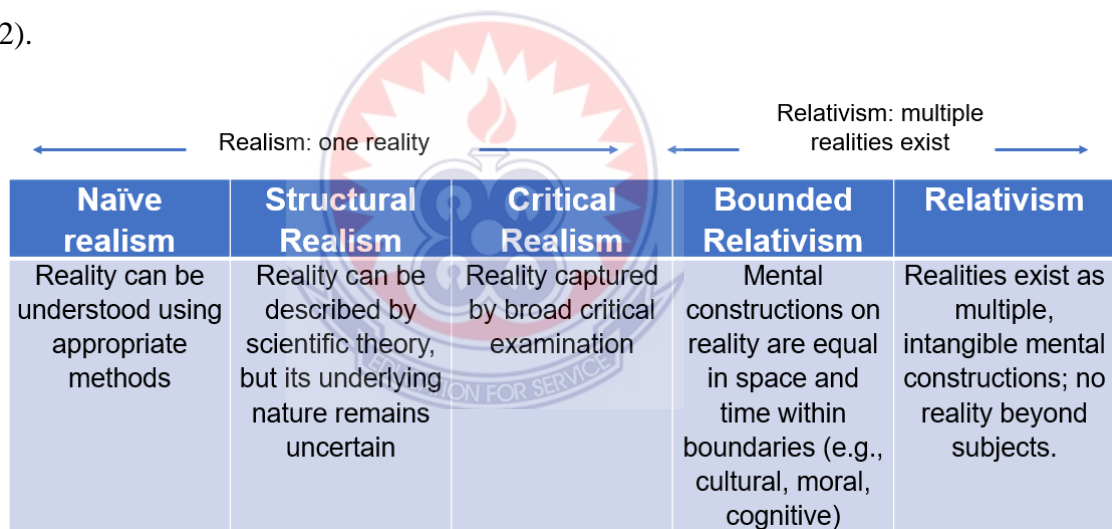
Paradigm refers to “a system of ideas, or world view, used by a community of researchers to generate knowledge. It is a set of assumptions, research strategies and criteria for rigour that are shared, even taken for granted by that community” (Fossey, Harvey, McDermott, & Davidson, 2002, p. 718). The philosophical paradigm that informed this study is the positivist/scientific paradigm (Creswell, 2014). The advocates of this paradigm believe real knowledge can be gained through observation and experiments and as such it best fits this study and its intended purpose.

##### 3.1.1 Ontology

Ontology seeks to answer, “what is reality?” It is the ‘study of being’, and how to gain knowledge about what actually exists in the world (Moon & Blackman, 2014). According to Moon and Blackman (2014), ontology deals with the truth

claims that a researcher can make about reality, specifically, how researchers deal with different and conflicting ideas of reality.

The ontological position of the researcher is realism. Realism is the view that objects have an existence independent of the knower (Cohen et al., 2007; Bryman, 2015; Moon & Blackman, 2014), a discoverable reality exists independently of the researcher (Pring, 2000). On the other hand, relativist ontology is based on the philosophy that reality is produced within the human mind, hence there is no such thing as a “true” reality. Instead, reality is 'relative' to how people see it at any particular time and place. (Moon & Blackman 2014). Moon and Blackman have depicted this succinctly in a diagrammatic form for easy understanding (see Figure 2).



**Figure 2: Ontological Perspectives**

### 3.1.2 Epistemology

Epistemology deals with the study of knowledge, specifically, what constitutes a knowledge claim, how can knowledge be acquire, and how can its transferability be assessed (Moon & Blackman, 2014). Epistemology answers the question, “how is it possible to know reality?” Epistemology influences how researchers frame their research in their quest to discover knowledge.

Positivism emphasizes the importance of observation, experience, and verifiable evidence in acquiring knowledge. According to positivists, knowledge can only be derived from empirical data obtained through the senses or logical deductions based on these observations. This perspective seeks to establish a clear distinction between science and other forms of knowledge, such as religion or metaphysics, which positivists considered as non-scientific and lacking empirical grounding.

Positivists argue that people's opinions, values, and beliefs about reality may be false or inaccurate in the absence of scientific evidence. As a result, positivists consider processes for knowledge management to be objective concepts that must be discovered rather than created by the organization (Mohajan,2020).

Positivists aim to explain relationships, and positivists seek to identify causes that influence outcomes. (Creswell, 2009). They also formulate laws that yield a basis for prediction and generalization. Correlation and experimentation are used to break complex interactions into their various parts, while direct experience and observation are used to gather verifiable evidence; this frequently includes empirical testing, random samples, controlled variables (independent, dependent, and moderator), and control groups. Positivists regard their methodology as value neutral, which means that the knowledge generated is also fair and balanced. (Chapman, 2018).

### **3.2 Research Approach**

Experts agree that there are generally three main types of research approaches (Creswell & Creswell, 2014). These approaches are quantitative, qualitative, and mixed methods. None of these approaches is better than the other; each has its own strengths and limitations.

This study employed the quantitative research approach (Field, 2018; Patten & Newhart, 2018; Hahs-Vaughn & Lomax, 2020). Quantitative research is used to quantify behaviours, opinions, attitudes, and other variables and generalize from a larger population. Mohajan (2020). On the other hand, qualitative research is a method of conducting in-depth studies into social phenomena. It focuses on the “why” and “how” of social phenomena rather than the “what,” and it is based on direct experiences of humans as meaning-making agents in their daily lives (Tan, 2015).

Quantitative research is formal, objective, rigorous, deductive approach, and systematic strategies for generating and refining knowledge to problem solving (Kivunja & Kuyini, 2017). Its designs are either experimental or non-experimental and seek to obtain accurate and reliable measurements (Rahman, 2017). It consists of systematic observation and description of the characteristics or properties of objects or events for the purpose of discovering relationships between an independent (predictor) variable and a dependent (outcome) variable within a population.

The quantitative research approach was chosen for this study because the researcher wanted to find out whether using games to teach English grammar is more effective than the traditional method of teaching. The method deals with larger samples thereby making generalizing more reliable or accurate. It also allows the researcher to have more control over how the data is collected and be distant and objective from the experiment in order to get valid results which makes it easier to be replicated or repeated (Cook, Campbell, & Shadish, 2002).

### 3.3 Research Design

The research design refers to the overall strategy chosen to integrate the different components of the study in a coherent and logical way, thereby, ensuring the research problem is effectively addressed; it constitutes the blueprint for the collection, measurement, and analysis of data (Langley & Abdallah, 2015). As per the problem of the study, this study employed a quasi-experimental design. A quasi-experiment is an empirical study used to appraise the causal effect of an intervention (treatment) on a target population from which participants are not randomly assigned in groups (Creswell, 2014). The research design involved non-random assignment of participants into two groups namely treatment (experimental) and control groups. This design enabled the researcher to study the effect of using games in teaching English grammar.

Quasi-experimental design was chosen for this study due to the educational setting of the study. In educational settings, it can be challenging to randomly assign students or schools to different treatment groups due to practical constraints or ethical considerations. Therefore, a quasi-experimental design allows researchers to study the effects of an intervention, such as using games for teaching English grammar, while still maintaining some control over variables.

This design would provide insights into the practical implications and potential benefits of incorporating games into the English grammar curriculum in a context-specific manner. It can also accommodate pre-existing groups or conditions, which is the case in Ghanaian basic schools where students are already exposed to different teaching methodologies. By comparing the outcomes of students who are exposed to games with those who are not, researchers can account for existing

differences in educational practices and assess the unique impact of incorporating games as an instructional tool.

### **3.4 Population**

Fraenkel and Wallen (2000) and Patten and Newhart (2018) define population as the group to which the researcher would like to generalize the result of the study. A population of interest could be individuals, events, objects, or organisations that researchers are interested in. Because it is not generally feasible to study the entire population (i.e., conduct a census), researchers have devised multiple ways to select a few (sample) from the population in order to effectively generalise the findings to the population.

The population of the study consisted of all upper primary pupils of the Central Region. According to Kern et al. (2016), the target population in research is the aggregate of cases about which the researcher would like to make generalization. In this study, the target population consisted of all primary four (4) pupils in public schools in the Effutu Municipality.

### **3.5 Sample and Sampling Technique**

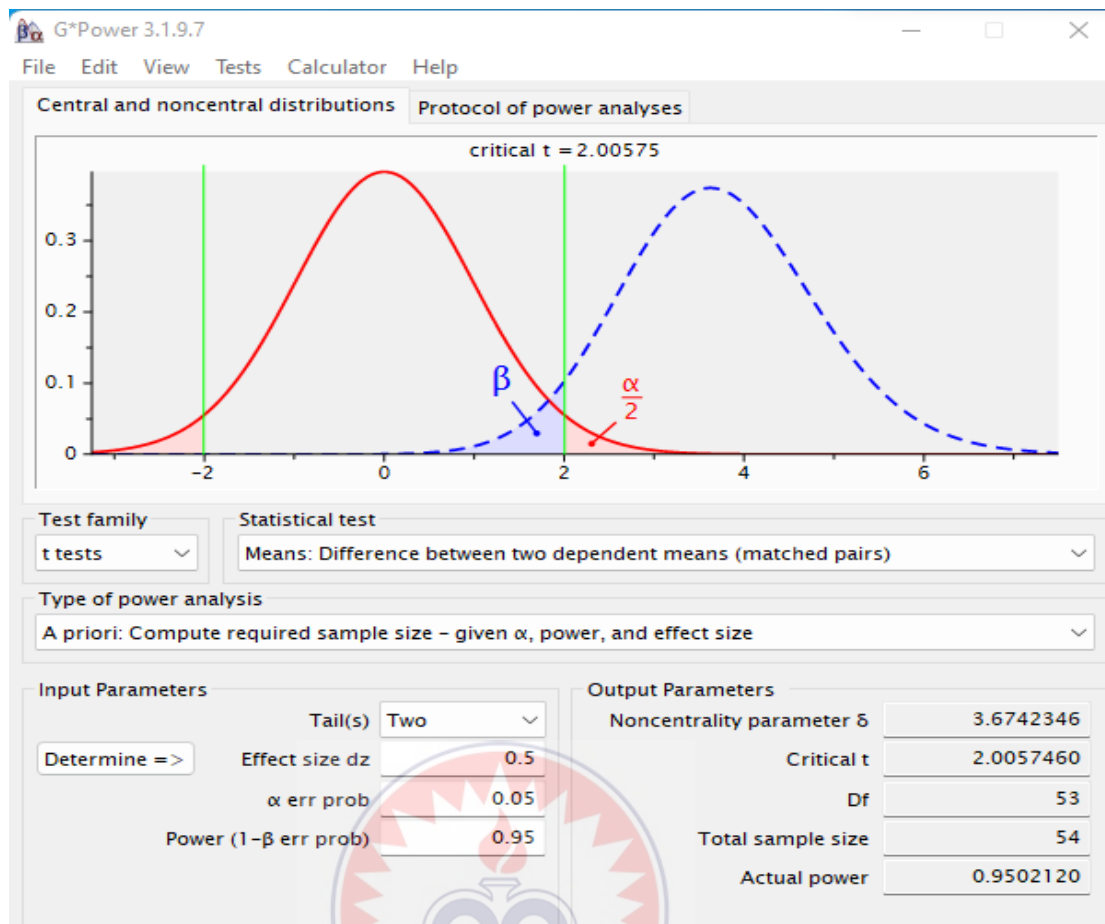
A sample refers to the unit selected from the entire population (Patten & Newhart, 2018). A sample is also described as the smaller and often more manageable number than the actual population (Bryman, 2015). In a way, a sample is a subset of the population. Depending on what researchers are trying to assess, sampling can be done using either a probability or non-probability approach (Patten & Newhart, 2018).

When sampling is probabilistic, each member in the unit has an equal chance of being represented. However, when sampling is non-probabilistic, participants are

selected based on some unique trait they have (e.g., they are available, or they have certain required characteristics of interest to the researcher). It is recommended that quantitative approaches use probability sampling, while qualitative approaches use non-probability sampling (Creswell & Creswell, 2014).

For this study, a simple random sampling procedure was used. Two schools were randomly selected (School A) to be the site for the experimental group and School B, was the site for the control group. In the two respective schools, primary four (4) classes were purposively selected for the study. These two classes represent the sample for the study. In this study, 82 primary four (4) pupils from the selected public basic school constituted the sample of the study.

To establish an appropriate sample size needed to compute requisite effect size (Cohen, 1988), the G\*Power software (Faul, Erdfelder, Lang, & Buchner, 2007) was used to compute the sample size. As a tool to compute statistical power analyses for multiple tests, G\*Power can also compute effect sizes and display graphically the results of power analyses (see figure 5). With an estimated alpha set at .05, and effect size determined at large effect (0.5; Cohen 1988), the actual sample size was determined at 54.



**Figure 3: G\*Power A Priori Analysis for Pretest-Post-test Protocol**

### 3.6 Research Instrumentation

Research instrument refers to the tool(s) used to collect data on the phenomenon of interest (Patten & Newhart, 2018). The research instrument employed for collecting data was test. Specifically, researcher made tests. A test is an examination, evaluation and observation, to determine a person's ability, aptitude, behavior, skill level, knowledge, or performance (under actual or simulated operating conditions or environmental) (Rubin & Chisnell, 2008). The test items consisted of sentences where learners had to provide answers to the missing parts and write the correct part of speech of the answer provided or to the underlined word. (See Appendix). The second instrument was a demographic questionnaire that



sought to explore participants' gender, age, family background, and language class teacher used in teaching them English.

### **3.7 Validity**

Joppe (2016) explains that validity determines whether the research truly measures what it was intended to measure or how truthful the research results are. The questionnaire and tests were validated by the researcher's supervisor by checking the content validity. Polit and Beck (2006) assert that content validity is a method of measuring or determining a consensus among experts with regards to the quality of a specific test item. Polit and Beck (2006) pointed out expert judgement is the main approach to check whether a test has content validity. In that regard, two English teachers from the two schools evaluated the test questions and made recommendations to the instruments.

### **3.8 Threats to Internal Validity**

Internal validity is defined as the degree to which the observed results represent the truth in the population being studied and are not the consequence of methodological errors (Patino & Ferreira, 2018).

Due to the uniqueness of experimental designs, vis-à-vis other quantitative designs, aspects like internal validity issues have to be addressed differently. Threats to internal validity are those changes that occur in an experiment which have some other explanation apart from just the intervention. According to Patten and Newhart, "all threats to internal validity can be overcome by using a true experimental design" (2018, p. 187).

There are several threats to internal validity that experts address in experimental designs (e.g., Patten & Newhart, 2018; Shadish et al., 2001). Threats

to internal validity include history; maturation; instrumentation; testing; statistical regression; selection; and mortality. This study, however, focuses on only three – instrumentation, selection, and mortality.

### **3.8.1 Selection**

The threat of selection occurs when the two groups are not randomly assigned to control and experimental groups. This skews the foundation because the two groups are not initially identical in all important aspects. Steps were taken to reduce the validity threat posed by selection. The researcher selected classes that were similar in class size, ratio of female to male, the times of the day they met, and English grammar level of the class (i.e., class grade average). It was ensured that the group are similar in age, grade level, and learning the same curriculum.

### **3.8.2 Mortality**

Mortality refers to the differential loss of participants from the compared groups. This occurs when Participants withdraw from the study while it is still underway. (Patten & Newhart, 2018).

Mortality inevitably leads to a statistical change in the average not resulting from the treatment. Participants drop out during an experiment due to many possible reasons. The outcomes are therefore unknown for these individuals. Individuals may fail to complete observations for a variety of reasons including illness and time commitment (Gall et al, 2017) One way to account for attrition or mortality is to try to recruit more than the minimum required (Creswell, 2014) Incentives were also used to reduce attrition (Dillman et al, 2014; Gall et al, 2017) Participants were provided with Ball Pens at the start of the study and at the end of the study. As a result, there were no participants dropping out of the experiment.

### **3.8.3 Instrumentation**

Instrumentation occurs when there are changes in the measurement procedure from the time it was used at pre-test to the time it was used at post-test (Drennan & Hyde, 2008). For example, participants may pay more attention to the items in the instrument at one assessment than another. When this happens, answers change, and results provide inconsistent responses. The researcher used the same instrument for the pre-test and post-test. To account for the threats to instrumentation validity, the test items were not altered during the study.

The administration of a pre-test prior to the program may convey knowledge to the participants. This threat can either overstate or understate the intervention effect. To reduce or limit the threat of testing, an equivalent test was used at post-test.

### **3.9 Reliability**

In this study, the reliability of the test was determined through internal consistency. Using the Cronbach's Alpha coefficient, internal consistency measures how homogeneous and reflective a scale or measurement device's items are of the same underlying concept. Cooper & Schindler (2011) recommended that the acceptable value of alpha should be equal to or greater than 0.70. The overall Cronbach Alpha value of the test questions/items of the study was 0.83.

### **3.10 Data Collection Procedure**

The duration of the data collection was five weeks. Before the data collection started, the researcher sought permission from the various authorities under which the schools and learners were and was granted permission to proceed. The researcher used two schools during the data collection period. Within these two

schools, Basic four pupils were selected randomly to be used as the control group in one school and the experimental group in the other. Basic 4 pupils were chosen for this study because emphasis on English grammar begins at the Basic 4 level.

The pre-test was administered to both groups during the first week while the researcher was also observing the way English grammar was taught to the learners. From the second to the fourth week, the learners were taught twice a week for an hour each day. The control group was taught 'traditionally' during that period. On the other hand, the treatment group was taught grammar via games. The game used was 'Board Race'. Board race is a game where in this study the learners were put into groups and activities on the topics being treated were given to the groups. Each group is to come up with sentences based on the topics treated (Verbs, nouns, adverbs, and adjectives) and each member takes a turn to run to the board and write out their sentences. This activity is timed and the group with the most sentences win.

This game was used to teach concepts such as Nouns, Pronouns, Verbs, Adjectives, and Adverbs. In this experiment, the researcher dealt with two variables: one independent variable i.e., games, and one dependent variable i.e. performance. Performance here means the understanding and application of the acquired knowledge about the concepts in sentence construction. The researcher herself taught both groups to control extraneous variables like different style of teaching, teacher attitude, tone of voice, classroom environment, fatigue etc.

Before the study started, learners who were receiving extra lessons after school were asked not to be part of the study so that the outcome of the study be true for the population.

After the treatment, the researcher conducted a post-test for both groups: Control and Treatment/Experiment. Importantly, the items and format of the post-test were same for both the groups i.e., a single and same test was given to both groups.

### **3.11 Data Processing and Analysis**

Data was analysed using SPSS V28.5. Data was processed and analyzed using One-way and two-way ANCOVA (Field, 2018; Hahs-Vaughn & Lomax, 2020). Analysis of Covariance (ANCOVA) is a statistical technique used to analyze data while controlling for the effects of one or more covariates. ANCOVA was chosen for the analysis of the results of this study because it allows researchers to examine the impact of independent variables on the dependent variable, while accounting for the influence of covariates. This therefore makes it suitable for this study.

One-way ANCOVA is employed when there is one independent variable and one covariate. It extends the traditional analysis of variance (ANOVA) by incorporating the covariate into the model. The primary purpose of one-way ANCOVA is to determine whether there are significant differences in the means of the dependent variable across different levels of the independent variable, while controlling for the covariate's influence. For this study, the One-Way ANCOVA was chosen for its suitability in analysing Hypothesis one which was the comparison of the post-test scores of the two groups i.e., the treatment and control groups.

One-way ANCOVA is particularly useful in situations where the covariate is believed to be related to the dependent variable and may have an impact on the results. By statistically adjusting for the covariate, researchers can reduce potential confounding effects and enhance the accuracy of their findings. Two-way ANCOVA

on the other hand expands the analysis to include two independent variables and one or more covariates. This technique allows researchers to examine the main effects of each independent variable, as well as their interaction, while controlling for covariates. Two-way ANCOVA enables a more comprehensive exploration of the relationships between variables, providing insights into their individual and combined influences on the dependent variable (Field, 2018; Hahs-Vaughn & Lomax, 2020).

### **3.12 Ethical Considerations for the Study**

Ethics in counselling and research require that we recognize the basic rights of humans. It is important that we respect clients and participants' rights to autonomy, while activating our own principles of beneficence and justice (Remley & Herlihy, 2016). I observed the following key ethical protocols:

#### **3.12.1 Informed consent**

I gained approval from the department and permission from the Effutu Municipal Directorate. Thereafter, I informed participants about the research through their headteachers and class teachers. I ensured informed consent was voluntary and that participants could pull out of the study without victimization.

#### **3.12.2 Confidentiality and Privacy**

I did not ask participants to provide their names nor any identifying information to protect their privacy. Moreover, I kept the data digitally under multiple layers of password protection to ensure confidentiality for participants.

## CHAPTER FOUR

### LIMITATIONS, RESULTS, AND FINDINGS

#### 4.0 Overview of the Chapter

The study was designed to examine the effect of using play-based learning on basic school learners' performance in English Grammar. A quantitative quasi experimental design was employed to accomplish the study's goal. The instruments used to gather information was in the form of tests: pre-test, post-test, and a demographic data questionnaire. Descriptive statistics were used to report the demographic data of the learners. The learners' scores were analyzed using SPSS version 28.5. A One-Way ANCOVA was used to analyze Hypothesis 1. Hypotheses 2 and 3 were analyzed using a Two-Way ANCOVA. The results are presented and discussed in this chapter.

#### 4.1 Limitations

Several limitations occurred in this study. Inasmuch as randomized control trials are the golden standard for social science-related research (Balkin & Kleist, 2017; Patten & Newhart, 2018; Shadish et al., 2001), they have their characteristic weaknesses. Despite the strength in pre-testing, there are times participants become sensitized to the experimental treatment. This means that participants may have an overview of the expectations in the pre-testing. Therefore, changes observed in the experimental group may be the effect of a combination of the pre-test and the treatment. This is called "pretest sensitization or reactive effect of testing" (Patten & Newhart, 2018, p. 184). To offset these limitations, future research could do the following:

- Randomly sample from multiple economically endowed communities to test the effectiveness of using games in understanding English grammar.

- Train teachers in the use of specific games and test how their use of these games either help or hinder learners' ability to understand English grammar.
- Qualitatively explore the experiences of teachers who have been trained in using games to teach English grammar, specifically in terms of their perception of student engagement in class.
- Qualitatively find out from students on how the incorporation of games helped in their experiences of learning English grammar in school.

#### **4.2 Research Hypothesis**

The following were the research hypotheses that guided the work:

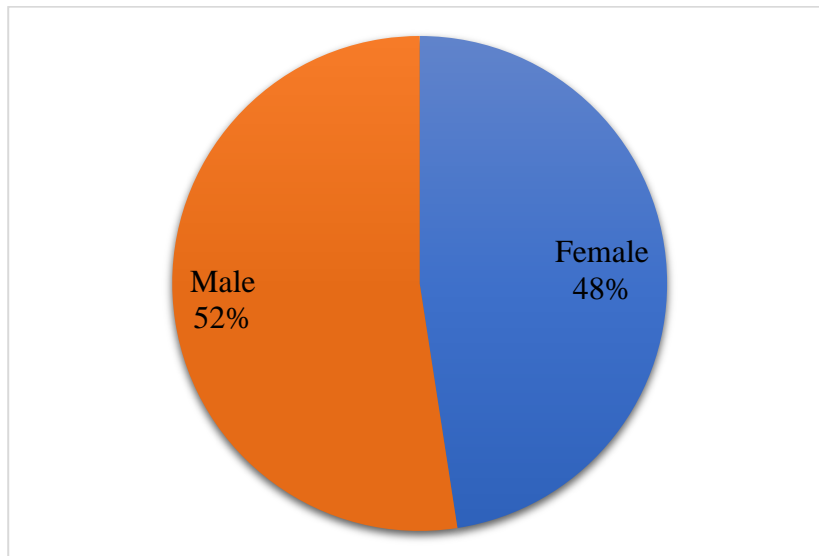
- H01: Learners in basic schools who received game-based instructions in learning English grammar will answer more grammar questions correctly than those who receive teaching as usual.
- H02: Learners who speak dominant languages at home will answer more grammar questions correctly than learners who speak non-dominant languages at home after intervention.
- H03: There will be a statistically significant difference in the mean score of males than females after the intervention/ at post-test.

#### **4.3 Results of Study**

Results of the study consisted of descriptive statistics to understand the demographic information of participants. Demographic information involved gender, age, work of parents, language spoken at home, and gender of English teacher. Thereafter, One-Way, and Two-Way ANCOVA analysis were used to understand the hypotheses.



### 4.3.1 Demographic Information



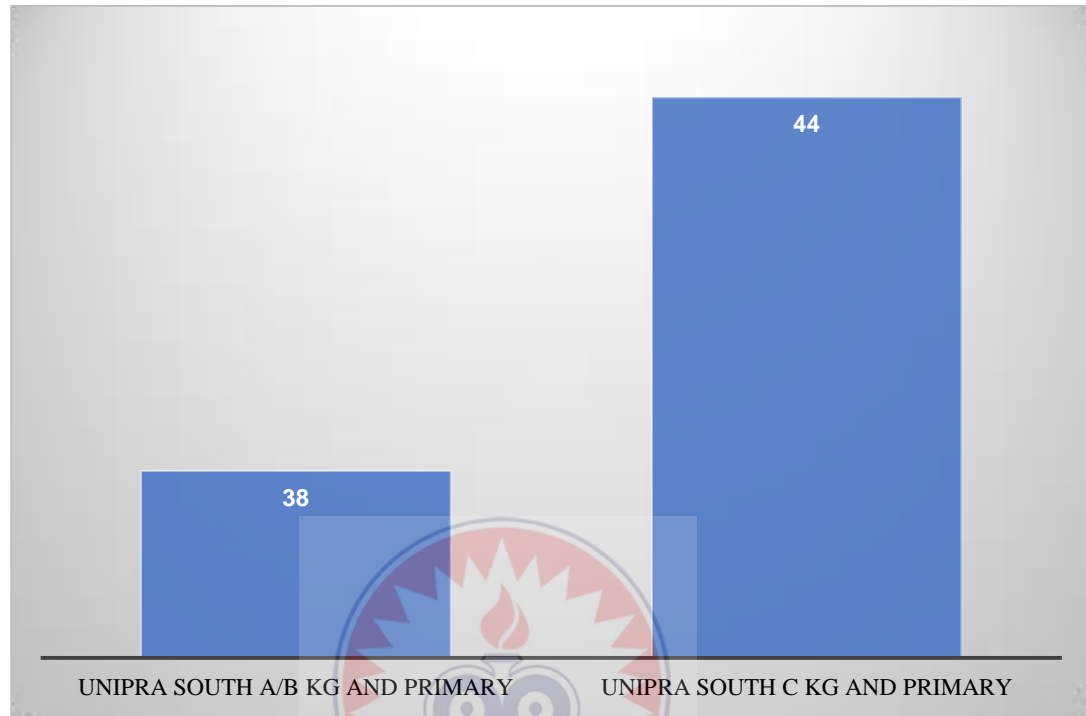
**Figure 4: Pie chart showing gender distribution of learners.**

Figure 4. above represents the results of the gender distribution of the respondents. The results show that 43 (52%) of the respondents were males and 39 (48%) were females. The result implies that the number of males outnumbered the number of females by 4. This implies that most of the respondents who took part in the study were males.

**Table 1: Table showing the frequency distribution of age of learners**

Description	Frequency	Percentage
9 years	1	1.2
10 years	6	7.2
11 years	26	31.3
12 years	22	26.5
13 years	15	18.1
14 years	8	9.6
15 years	2	2.4
16 years	2	2.4
Missing	1	1.2
<b>Total</b>	<b>83</b>	<b>100</b>

Participants median age was 12 years ( $M = 12.049$  years;  $SD = 1.387$ ). The modal age was 11 years old. The youngest in the group was 9 years old and the oldest was 16 years old. All the participants were in basic 4.



**Figure 5: Bar chart showing the frequency distribution of participants**

A total number of 82 learners took part in this study. Thirty-eight (38) of the learners were in Unipra A/B KG and Primary and they made up the experimental group while the majority of the participants (53.7%) were in Unipra South C KG and Primary. These same participants were also the control group.

#### **4.3.2 Hypotheses Testing**

This section focuses on presenting the main results of the study. Particularly, the hypotheses guiding the study were tested. Prior to testing these hypotheses, preliminary analyses were conducted to check for assumptions and also to find out whether the groups were similar from the beginning of the study or not. Again, assumptions specific to the types of analyses employed were also conducted.

### 4.3.2.1 Normality Test

For all inferential analysis, a decision must be made regarding whether to use a parametric statistical tool or non-parametric statistical tool. Testing the normality of the data helps provide an answer to whether to use a parametric test tool or not, taking into consideration how the variables were measured. It must be said that satisfying this assumption is critical to parameter estimations. The normality assumption is tested using data gathered on variables which at one point in time were used as a dependent variable in testing any of the hypotheses.

Regarding this study, the normality assumption was tested using data on a number of variables. These variables were used as the dependent variable(s) in testing the hypotheses which guided the study. Although there exist several ways of testing for the normality of data (such as Q-Q plot, histogram, Kolmogorov-Smirnov), Shapiro-Wilk test was used to test the normality of the data because it is appropriate for data with small sample size (Field, 2009). The details of the results are shown in Table 2.

**Table 2: Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total POST	.077	80	.200*	.972	80	.075

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The results, as shown in Table 2, indicate that the normality assumption for the dependent variable has not been violated. This was because the p-value was greater than .05 The p-value of the post-test was .075.

### 4.3.2.2. Hypothesis One

H01: Learners in basic schools who received game-based instructions in learning English grammar will answer more grammar questions correctly than those who receive teaching as usual.

The objective of this research hypothesis was to examine the effect of game-based instruction on learner's English grammar acquisition and use. The purpose was to find out whether learners who were taught through game-based activity(experimental) were going to do better than learners who were taught traditionally (control). The dependent variable was the post-test score whereas the pre-test score served as the covariate. In testing this hypothesis, a one-way ANCOVA analysis was used to compare the post-test scores for participants in the experimental groups and the control group while controlling for their pre-test scores. The results of the test for the effects are shown in Table 3.

**Table 3: ANCOVA Test for effect of game-based instruction on English grammar acquisition and use. Tests of Between-Subjects Effects**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	562.290 <sup>a</sup>	2	281.145	9.287	.000	.194
Intercept	3655.862	1	3655.862	120.759	.000	.611
Total PRE	10.690	1	10.690	.353	.554	.005
Category	527.397	1	527.397	17.421	.000	.185
Error	2331.098	77	30.274			
Total	21897.000	80				
<b>Corrected Total</b>	<b>2893.388</b>	<b>79</b>				

a. R Squared = ,194 (Adjusted R Squared = ,173)

Dependent Variable: TotalPOST

The results in Table 3 shows that after controlling for the pre-test-scores, there was a significant difference in the post-test scores for the experimental group and the control group,  $F(1, 77) = 17.421$ ,  $p = .000$ ,  $\eta_p^2 = .185$ . As indicated by the significant effect of the corrected model and the category variable in the ANCOVA analysis, game-based instruction has a significant effect on English grammar acquisition and use. These findings imply that the introduction of game-based learning into English grammar instruction had a positive effect on their post-test scores than the traditional instruction approaches.

#### 4.3.2.3 Hypothesis Two

H02: Learners who speak dominant languages at home will answer more grammar questions correctly than learners who speak non-dominant languages at home after intervention.

The objective of this hypothesis was to determine whether learners who spoke the dominant languages (languages spoken more frequently in the Effutu municipality i.e., Effutu, Fante and Twi) at home would score more than those who spoke the non-dominant languages (languages spoken less frequently in the Effutu municipality i.e., Ga, Ewe and Frafra). The purpose was to find out whether games/game-based instruction worked better for learners who spoke the dominant languages than learners who spoke the non-dominant languages. The dependent variable was the post-test score whereas the pre-test score served as the covariate. In testing this hypothesis, a two-way ANCOVA analysis was used to compare the post-test scores for dominant language speakers and non-dominant language speakers in the experimental group while controlling for their pre-test scores. The results of the test for the effects are shown in Table 4.

The result from the two-way ANCOVA revealed no significant effect of games or game-based instruction on learners acquisition and use of grammar on the basis of the dominant or non-dominant languages spoken at home,  $F(1, 75) = .499$ ,  $p = .482$ ,  $\eta_p^2 = .007$  (Table 4).

**Table 4: ANCOVA test for effect of games on dominant and non-dominant languages. Tests of Between-Subjects Effects**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	585.025 <sup>a</sup>	4	146.256	4.752	.002	.202
Intercept	2730.942	1	2730.942	88.730	.000	.542
TotalPRE	10.857	1	10.857	.353	.554	.005
Category	252.880	1	252.880	8.216	.005	.099
DHomeL	15.369	1	15.369	.499	.482	.007
Category * DHomeL	17.823	1	17.823	.579	.449	.008
Error	2308.362	75	30.778			
Total	21897.000	80				
<b>Corrected Total</b>	<b>2893.388</b>	<b>79</b>				

a. R Squared = .202 (Adjusted R Squared = .160)  
Dependent Variable: TotalPOST

The result indicates that dominant and non-dominant language speakers scored varying marks on their post-test, but the difference was not significant. This further suggests that the game used (Board Race) worked equally for the dominant and non-dominant language speakers in improving their English grammar acquisition and use.

#### 4.3.2.4 Hypothesis Three

H03: There will be a statistically significant difference in the mean score of males than females after the intervention/ at post-test.

Hypothesis three looked to examine the effect of game-based learning on learner English grammar acquisition and use based on gender. The purpose was to find out whether games/game-based instruction worked better for females than males. The dependent variable was the post-test score whereas the pre-test score served as the covariate. In testing this hypothesis, a two-way ANCOVA analysis was used to compare the post-test scores for dominant language speakers and non-dominant language speakers in the experimental group while controlling for their pre-test scores. The results of the test for the effects are shown in Table 5.

**Table 5: Tests of Between-Subjects Effects**

**Dependent Variable: TotalPOST**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	786.958 <sup>a</sup>	4	196.739	7.005	.000	.272
Intercept	3459.475	1	3459.475	123.176	.000	.622
TotalPRE	12.734	1	12.734	.453	.503	.006
Category	543.722	1	543.722	19.359	.000	.205
Gender	86.987	1	86.987	3.097	.083	.040
Category * Gender	113.463	1	113.463	4.040	.048	.051
Error	2106.430	75	28.086			
Total	21897.000	80				
<b>Corrected Total</b>	<b>2893.388</b>	<b>79</b>				

a. R Squared = , 272 (Adjusted R Squared = ,233)

The result from the two-way ANCOVA revealed a significant effect of games on the post-test score of males in the experimental group.,  $F(1, 53)=2.821, p=.099$ ,

$\eta_p^2 = .051$  (Table 5). The result indicates that the male learners responded more positively to the game-based instruction than their female counterparts thereby helping improve upon their English grammar acquisition and use. This further suggests that the game-based instruction worked better for males than for females in improving their grammar acquisition and use.

#### **4.4 Discussion of Findings**

The purpose of this study was to find out the effect of using game-based instruction in learners English grammar acquisition and use among basic 4 learners in the Effutu municipal. This section presents the discussion of the results of the research hypotheses that guided the study.

##### **4.4.1 Hypothesis One**

H01: Learners in basic schools who received game-based instructions in learning English grammar will not answer more grammar questions correctly than those who receive teaching as usual.

H11: Learners in basic schools who received game-based instructions in learning English grammar will answer more grammar questions correctly than those who receive teaching as usual.

The significant effect observed in the ANCOVA analysis suggests that game-based instruction positively impacts learners' post-test scores compared to traditional instruction methods. This finding aligns with the growing body of research supporting the effectiveness of game-based learning in language acquisition and use.

A study by Brezovszky, McNeill, Gruber-Muecke, and Hautopp (2017) focused on supporting English grammar learning through an online game. The researchers employed a quasi-experimental design and found that the game-based



intervention led to significant improvements in students' grammatical accuracy compared to traditional instruction.

In another study by Huang, Liang, and Su (2016), the effects of game-based learning on junior high school students' English grammar learning were investigated. The findings indicated that the game-based learning approach significantly enhanced students' grammar knowledge and improved their grammar performance.

Moreno-Ger and Burgos (2009) explored the effects of a game-based learning environment on students' English grammar learning. The study demonstrated that the game-based approach significantly improved students' grammar knowledge and promoted higher engagement and motivation compared to traditional instruction.

Seo (2018) conducted a study on the effects of a mobile game on college students' English grammar learning. The findings indicated that the mobile game-based intervention led to significant improvements in students' grammar knowledge and retention compared to a traditional lecture-based approach.

These studies conducted by different researchers consistently support the effectiveness of game-based learning in enhancing English grammar acquisition and use. They highlight the positive impact of game-based instruction on learners' grammar knowledge, performance, engagement, and motivation. Game-based learning provides engaging and interactive learning experiences, making it a viable technique for improving effective grammar learning and English language instruction.

#### 4.4.2 Hypothesis Two

H02: Learners who speak dominant languages at home will not answer more grammar questions correctly than learners who speak non-dominant languages at home after intervention.

H12: Learners who speak dominant languages at home will answer more grammar questions correctly than learners who speak non-dominant languages at home after intervention.

The results from the analysis of hypothesis two revealed that, there was no significant difference in the post-test scores between learners who spoke the dominant language of the area as opposed to learners who spoke the non-dominant language.

Research has shown that learners' home language can have a significant impact on their English grammar acquisition and use. This can be due to factors such as differences in grammatical structures, vocabulary, and pronunciation between the home language and English.

A study conducted by Mahmoodi-Shahreabaki and Tavakoli (2017) found that Persian-speaking learners of English had difficulty with certain aspects of English grammar, such as word order and tense usage, due to differences in the grammatical structures of the two languages. Similarly, a study by Li and Zhu (2013) found that Chinese-speaking learners of English had difficulty with English articles and prepositions, which are not present in the Chinese language.

However, language transfer can also have positive effects on English grammar acquisition. A study conducted by Gass and Selinker (2001) found that learners who had a strong first language foundation were able to transfer certain

grammatical structures from their home language to assist in the acquisition of English grammar.

In addition, learners who are bilingual or multilingual may have an advantage in English grammar acquisition, as they are already familiar with the concept of grammar rules and structures from their experience with multiple languages. A study by Potowski (2013) found that bilingual learners of English were able to transfer their grammatical knowledge from their home language to assist in the acquisition of English grammar and were able to use this knowledge to achieve grammatical accuracy in their use of English.

There are several studies with conflicting results when it comes to determining the effectiveness of game-based instruction in English grammar for ESL learners who speak the dominant language of an area or the non-dominant language.

A study by Chen, Chen, and Huang (2012) found that game-based instruction in English grammar improved the writing performance of Taiwanese EFL learners who speak Mandarin as their first language. The study reported that the participants enjoyed the game-based activities and found them helpful in improving their English grammar skills.

Similarly, a study conducted by Dastjerdi and Pirnazar (2018) in Iran found that game-based instruction improved the English language proficiency of Iranian EFL learners who spoke Farsi as their first language. The study concluded that game-based instruction could be an effective approach for teaching English grammar to EFL learners.

On the other hand, a study by Tsao and Tsai (2017) in Taiwan reported that the use of game-based instruction did not significantly improve the English grammar proficiency of Taiwanese EFL learners who spoke Mandarin as their first language.

The study suggested that game-based instruction may not be suitable for all EFL learners, and that the effectiveness of game-based instruction may depend on different learners' needs and learning styles.

Similarly, a study by Kim, Kim, and Park (2018) in South Korea found that the use of a game-based grammar instruction program did not significantly improve the English language proficiency of Korean EFL learners who spoke Korean as their first language. The study suggested that the program may have been ineffective because it did not address the specific needs of the learners and did not provide adequate feedback to the learners.

Overall, the research provided above demonstrate that the efficiency of game-based instruction in English grammar may be dependent on a variety of circumstances, including the needs of the learners, their learning styles, and certain characteristics of the game-based activities used. It is therefore advised that while creating and implementing game-based instruction for EFL learners, teachers take these variables into account.

#### **4.4.3 Hypothesis Three**

H03: There will be no statistically significant difference in the mean score of males than females after the intervention/ at post-test.

H13: There will be a statistically significant difference in the mean score of males than females after the intervention/ at post-test.

The results from the analysis of hypothesis three revealed that game-based learning improved the post-test scores of all the learners in the treatment group, yet the post-test scores of the males in the treatment group were slightly significant than the females. Studies, however, have opposing results or views on performance

difference based on gender. While some suggest a significant difference, others report no significant gender difference.

A study by Verner and Bastien (2018) investigated the impact of digital game-based instruction on English grammar learning. They found that male students achieved significantly higher scores compared to their female counterparts. The researchers attributed this difference to factors such as males' prior gaming experience and familiarity with digital technologies.

Another study by Lee et al. (2015) explored the gender differences in learning outcomes after a mobile game-based instructional approach among 69 South Korean students on the topic of English grammar. The study found that male students demonstrated a significantly higher level of learning achievement compared to female students. Kekelis and Blum-Martinez (2010) investigated the impact of computer-based games on learning outcomes of middle school students. They found that males in the treatment group scored higher on post-tests than their female counterparts. However, the authors acknowledged the small sample size and the potential influence of other factors such as interest and motivation on the results.

In contrast, a study by Loh and Shahrill (2018) investigated the effectiveness of educational digital games on English grammar learning among 116 Malaysian secondary school students. The results indicated that both male and female students showed significant improvement in their English grammar scores, and the educational game had a positive effect on the achievement of both genders.

Similarly, another study by Thanh and Qin (2017) examined the impact of a computer-based game on the English grammar learning of 76 Vietnamese students aged 12-13 years old. The results suggested that both male and female students had significant improvements in their English grammar scores after using the

educational game, and there were no significant gender differences in the learning outcomes.

Although contrasting, the above studies prove that game-based instruction is an effective teaching and learning tool and as such teachers are to consider the uniqueness of the target learners such as individual differences, learning styles, experience, cultural background among others when designing games. When this is achieved, game-based instruction will cater to needs and interest of all learners regardless of gender and create equal learning experiences for learning English grammar.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Overview

The chapter discusses the summary of the study, key findings, and recommendations. Suggestions for further studies are also discussed in this chapter.

#### 5.1 Summary of the Study

The study was conducted at selected basic schools in the Effutu Municipal District. The aim of the study was to establish how the use of games facilitates the learning of English grammar among a group of basic school pupils.

The objectives of the study were to:

1. Understand whether game-based learning can improve upon learners' English grammar acquisition.
2. Understand whether games work for learners who speak the dominant language or the non-dominant language of the setting. (Effutu Municipality).
3. Understand whether games work better for males or for females.

To achieve the objectives of the study, three (3) hypotheses were tested. This study was supported by the positivist philosophy and the quantitative approach was employed. Quasi-experiment design was used to assess the causal effect of an intervention (treatment) on a target population from which participants are not randomly assigned in groups. In this study, 82 primary four (4) pupils from two public basic schools were selected to constitute the sample of the study. The sample was made up of 39 males and 43 females. To determine the effect of the independent variable (instruction with games) on the dependent variable (performance test), three instruments, namely pre-test, post-test and demographic questionnaire were used.

The reliability and validity of the instruments were ensured by pre-testing it and the validity of the content was ascertained through experts' judgment. The researcher took steps to overcome threats to validity. Data were analyzed using frequencies, percentages, means, standard deviation, one-way and two-way ANCOVA. Findings revealed that the use of games in teaching improved students understanding and use of English grammar.

## **5.2 Key Findings**

The outcome of the study revealed that:

1. The significant effect observed in the ANCOVA analysis suggests that game-based instruction positively impacts learners' English grammar acquisition and use compared to traditional instruction methods.
2. There was no significant difference in the post-test scores between learners who spoke the dominant language of the area as opposed to learners who spoke the non-dominant language. Although learners' home language can have a significant impact on their English grammar acquisition and use. This can be due to factors such as differences in grammatical structures, vocabulary, and pronunciation between the home language and English.
3. The analysis of hypothesis revealed that game-based learning improved the post-test scores of all the learners in the treatment group, yet the post-test scores of the males in the treatment group were slightly significant than the females. Which meant that the males were more interested in the games than the females.



### **5.3 Conclusion**

To summarize, this study investigated the impact of using educational games in the English language classroom as a tool to improve learners' grammar understanding and acquisition. The findings indicate that games can be used to teach English grammar to young learners in Basic schools in the Effutu Municipality. Grammar mastery is important for language acquisition because it demonstrates competency and is useful in everyday interactions with people. Similarly, competence in using grammar in context boosts confidence. As a result, grammar should not be taught or learned in isolation, but rather through meaningful methods that allow second language learners to easily relate to its usage.

The lack of a statistically significant difference in post-test scores between learners speaking the local dominant and non-dominant languages suggests the possibility that students' home language may not have a role in how well they pick up English grammar. On the other hand, the recognition of possible influences such as variations in vocabulary, grammatical structures, and pronunciation highlights the necessity of an effective way of teaching languages.

Males in the treatment group had slightly higher post-test results, according to the study, which points to a little gender difference in their involvement with game-based learning. This research emphasizes how crucial it is to take gender preferences and interests into account when designing instructional materials, particularly when using gamified and interactive learning techniques.

### **5.4 Implications**

The overarching purpose of this study was to establish a cause-and-effect on the use of games in English language among basic school pupils to be able to provide teachers of the English language a variety of ways through which they can

use to make teaching and learning fun as well as to enhance learners understanding and use of grammar. This can be done through the appropriate selection of games to use and when to use them to be effective.

The results of this study have shown that the use of variety, such as games in the classroom, has proven to improve upon the performance of learners. This will contribute to the existing body of knowledge in understanding teaching and learning of English grammar and local literature. It will also inform stakeholders and policymakers to enhance teacher knowledge on the use of games for teaching and learning of English grammar through the organization of in-service training and workshops to improve upon practice.

The results of this study would enable curriculum developers realise the importance of games in teaching English grammar and it will guide them in planning and designing the curriculum to reflect upon the use of games that should accompany the pedagogy and content in instruction. This will also cause policy makers to focus on ways through which games can be incorporated into the curriculum, while providing the necessary teaching and learning materials and training of teachers for its implementation.

Lastly, the study would add to already existing literature which is quite few for our country and may inspire other researchers to embark on studies into the use of games in teaching grammar for improved student English competency levels in basic schools across Ghana.

## **5.5 Recommendation**

Based on the findings of this study, the following recommendations are made:

1. Considering the positive impact of game-based instruction on English grammar acquisition, teachers in the Effutu Municipality should explore the integration of interactive and game-based elements into the language curriculum. This could involve the development of educational games specifically tailored to enhance grammar skills, providing a dynamic and engaging learning experience for students.
2. While the study did not find a significant difference in post-test scores based on home language, it is crucial to acknowledge the potential influence of learners' linguistic backgrounds. Therefore, language teachers should adopt a sensitive and inclusive approach that recognizes and addresses linguistic diversity. This may involve incorporating examples and exercises that relate to both dominant and non-dominant languages in the region.
3. Given the observed gender-based differences in engagement with game-based learning, teachers should consider tailoring instructional approaches to ensure gender inclusivity. This may involve designing games that appeal to a broader range of interests, incorporating diverse themes, and actively seeking input from both male and female learners in the development of educational games.

## **5.6. Suggestion For Further Studies**

This study could have either used the post-test-only randomized control group design or a combination of both called the “Solomon randomized four-group design” (Patten & Newhart, p. 184). It is recommended that any future researchers

who want to replicate this study use the post-test only design and compare the results with this current study. Finally, other researchers can use the Solomon randomized four-group design to offset the reactive effect of testing.

A delayed post-test may also be included in future research to explain whether with time and consistency the traditional approach will work. Although there was a positive effect, the intervention's short duration was a limitation. This was due to the researcher's limited time. Further research may extend the duration of this intervention, and the role of the teacher in such tasks may be investigated in the future.



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## APPENDICES

Appendix	Description
Appendix A	- Informed Consent
Appendix B	- Letter from Department
Appendix C	- Permission Letter from GES: Effutu Municipal Directorate
Appendix D	- Demographic Questionnaire
Appendix E	- Test Questions



## APPENDIX A

### Informed Consent

University of Education, Winneba  
Faculty of Educational Studies  
Department of Counselling Psychology

Learning Through Games: An Experimental Design of Games in Learning English Grammar at The Basic Level.

Principal Investigator: Joana Ashardey Ashilley

Faculty Supervisor: Hannah E. Acquaye, PhD

You are being invited to participate in a research study. The study is voluntary so you can choose to take part or not.

**Purpose of the study:** The purpose of this study is to understand if using play-based pedagogy will enhance English proficiency of basic school learners. What you will be asked to do in the study: When you take part in this study, you will be asked to complete 2 sets of questionnaires. Please note that the information obtained in this research may be used in future research. You will be asked to complete a set of demographic questions and a questionnaire on your experiences in play-based pedagogy. There should be no discomforts with any of these questions.

You will not be given any incentive in taking part of this study.

**Time required:** We expect that you will do the questionnaire in no more than 30 minutes.

**Age requirement:** To take part in this study, you must be 18 years and above, be a teacher in the Basic School, and teach English to children at the basic school level.

**Study contacts for questions about the study or to report a problem:** If you have questions, concerns, or complaints, or think the research has impacted you negatively in any way, communicate with: Joana Ashilley at 0541725548 or her supervisor, Dr. Acquaye at [heacquaye@uew.edu.gh](mailto:heacquaye@uew.edu.gh).

## APPENDIX B

### Permission Letter from Department



UNIVERSITY OF EDUCATION, WINNEBA  
FACULTY OF EDUCATIONAL STUDIES  
**DEPARTMENT OF COUNSELLING PSYCHOLOGY**

P. O. Box 25, Winneba, Ghana  
030 298 0904

[psychology@uew.edu.gh](mailto:psychology@uew.edu.gh)

#### TO WHOM IT MAY CONCERN

Dear Sir/Madam,

#### LETTER OF INTRODUCTION

I write to introduce to you the bearer of this letter **MISS JOANA ASHARDEY ASHILEY**, a graduate student in the Department of Educational Foundations of the University of Education, Winneba.

She is reading for a Master of Philosophy Degree in Curriculum and Pedagogic Studies. As part of the programme, she is required to undertake a research titled: **LEARNING THROUGH GAMES: AN EXPERIMENTAL DESIGN OF GAMES IN LEARNING ENGLISH GRAMMAR AT THE BASIC LEVEL.**

She needs to administer questionnaire to enable her gather information for her data analysis and she has chosen to do so in your institution.

I would be grateful if she is given the necessary assistance to enable her undertake this important exercise.

Thank you.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Yayra Dzakadzie'.

**DR. YAYRA DZAKADZIE**  
**AG. HEAD OF DEPARTMENT**



## APPENDIX C

### Permission Letter from Municipal

## GHANA EDUCATION SERVICE

In case of reply the number and  
Date of this letter should be  
Quoted



REPUBLIC OF GHANA

MUNICIPAL EDUCATION OFFICE  
POST OFFICE BOX 54  
WINNEBA  
TEL: 03323 22075  
Email: [geseffutu@gmail.com](mailto:geseffutu@gmail.com)

My Ref. No: GES/CR/EMEOW/LC.80/VOL.6/21  
Your Ref. No:.....

DATE: 21<sup>ST</sup> NOVEMBER, 2022

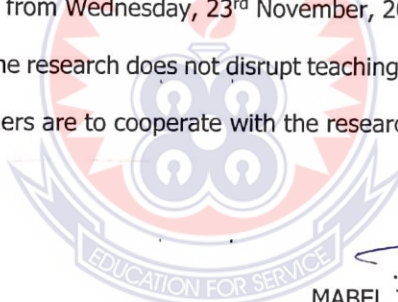
### **RE:REQUEST FOR PERMISSION TO UNDERTAKE A RESEARCH**


We acknowledge receipt of your letter dated 7<sup>th</sup> November, 2022 requesting for permission to undertake a research in Basic Schools in the Municipality.

Permission is therefore granted to Joana Ashardey Ashilley, a final year M.Phil student pursuing Curriculum and Pedagogic Studies at the Department of Educational Foundations at the University of Education Winneba, to conduct a research on the topic **"LEARNING THROUGH GAMES: AN EXPERIMENTAL DESIGN OF GAMES IN LEARNING ENGLISH GRAMMAR AT THE BASIC LEVEL**. Her programme will last for three weeks starting from Wednesday, 23<sup>rd</sup> November, 2022.

You are to ensure that the research does not disrupt teaching and learning in the schools.

Headteachers and teachers are to cooperate with the researcher to gather relevant data for her work.



  
MABEL JUDITH MICAH (MRS)  
MUNICIPAL DIRECTOR OF EDUCATION  
EFFUTU-WINNEBA

MADAM JOANA ASHARDEY ASHILLEY ✓  
DEPARTMENT OF EDUCATIONAL FOUNDATIONS  
UNIVERSITY OF EDUCATION  
WINNEBA

THE MUNICIPAL DIRECTOR  
EFFUTU MUNICIPAL EDUCATION OFFICE  
WINNEBA

HEADTEACHERS  
CONCERNED SCHOOL  
WINNEBA

cc: All SISOs  
Effutu Municipality

GCMRS

## APPENDIX D

### Questionnaire for the Basic School Pupils

#### Bio-Data of Respondent

Code Number: \_\_\_\_\_

1. How old are you? \_\_\_\_\_

2. What is your gender?

a) Female [ ]

b) Male [ ]

3. What is the name of your School? \_\_\_\_\_

4. What is the gender of your English teacher?

a) Male [ ]

b) Female [ ]

5. Does your English teacher use only English to teach you in class?

a) Yes [ ]

b) No [ ]

6. What language do you speak at home?

a) English [ ]

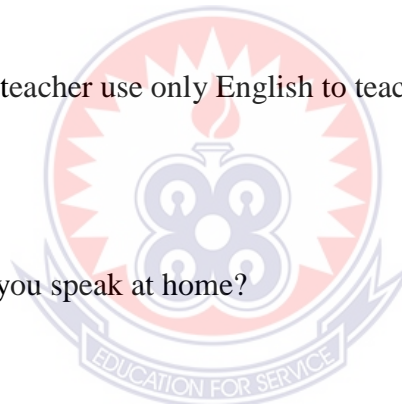
b) Ga [ ]

c) Twi [ ]

d) Others (specify) \_\_\_\_\_

7. What work does mummy do? \_\_\_\_\_

8. What work does daddy do? \_\_\_\_\_



## APPENDIX E

### Test Questions for the Basic School Pupils

#### ANSWER ALL QUESTIONS

Indicate the part of speech of the highlighted words in the following sentences.

1. She went to the market and bought some eggs.

.....

2. I want to go now. . . . .

3. What are you doing there?.....

4. There is a mouse under the piano.....

5. Masons build houses. Masons is a/an .....

6. John is my best friend.....

7. She looked up but didn't see anything.....

8. Have we bought enough chairs? .....

9. That was a difficult question. ....

10. She was very impressed with her results. Here very is a/an

.....

Fill in the blank spaces with the following words and write the parts of speech of the words.

(excited, finished, quickly, Adwoa, move, clothes, happy, table, rainfall, washed)

1. He \_\_\_\_\_ his homework. ....

2. \_\_\_\_\_ is working on the computer.....

3. Will you help me \_\_\_\_\_ the \_\_\_\_\_?...../ .....

4. There have been two heavy \_\_\_\_\_ this July.....

5. Children grow \_\_\_\_\_. .....

6. He is very \_\_\_\_\_ today. ....

7. I am so \_\_\_\_\_ that we are going to the USA tomorrow. ....

8. My father \_\_\_\_\_ our \_\_\_\_\_ on Sunday.

...../.....

Endorsed by:

Hannah E. Acquaye, PhD  
Principal Research Supervisor  
November 3, 2022

