



A Study on the Usage of the Board Race Game; as a Grammar Retention Strategy for English as a Second Language (ESL) Learners

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ABSTRACT

Language games are often recognized as one of the important components when teaching and learning English, in a Second Language classroom. Conversely, in the traditional classroom setting, playing games is believed to be highly unproductive. Given that, this study aims to evaluate the effectiveness of language games as a grammar retention strategy for ESL learners. The study was conducted at All Saints' College, Sri Lanka using a mixed methods research approach where the sample groups were experimented and observed in two settings: the traditional classroom and the game-based approach. For data collection, all three classes of grade six, with 30 students in each, were classified randomly as the experimental group and the two control groups. While the experimental group was exposed to the game, "The Board Race" when teaching irregular past tense, the control groups were taught the same without the game. According to the results which were achieved from the t-test, through a comparison of the mean scores of the pre-test and two post-tests, the experimental group exceeded the two control groups with higher mean values, during the immediate retention stage and the delayed retention stages, proving that the two teaching methods have different influences on grammar retention. The above results were further confirmed by the positive responses of the experimental group in terms of behavioral, cognitive, and emotional engagement. Thus, this study suggests the need to incorporate games with text-based instructions in the ESL classroom, which is helpful for the students to retain grammar, in the long term.

1. Introduction

A language is a set of terms used to convey a specific meaning, with vocabulary serving as the major building block. "Without grammar, very little can be conveyed, without vocabulary, nothing can be conveyed" (Wilkins, 1972, p.111). Accordingly, a command of both grammar and vocabulary is required to communicate through language in any way that is acceptable and meaningful. Harmer (1991) further explains, "if language structure makes up the skeleton of language, then it is vocabulary that provides the vital organs and flesh" (p. 153). In essence, what is referred to as "vocabulary items"—nouns, verbs, and adjectives—are considered to have more information than grammatical elements.

Teaching and learning English as a second language has always been a very challenging task for both the teachers and the learners, requiring constant effort, especially concerning young learners. However, the traditional learning experience is often dominated by passive learning, where teachers consider that "students are empty receptacles in which they must deposit information" (Freire, 1972, p.75). Provided that, vocabulary is identified as the foundation of language learning in which grammar is closely associated; as far as language instruction is concerned, Nguyen and Khuat (2003) state, many students consider vocabulary learning as boring, mainly because it requires the students to memorize unfamiliar words. Similarly, Andrew (2003, as cited in Tran, 2009) claims, both teachers and learners are in the view that "grammar is boring"(p. 8). This further highlights the importance of creating meaningful and engaging ways to teach the target language, so that learning and teaching are done with the least disturbance as well as with much effectiveness.

One way of involving students in active learning, where the students are encouraged to engage in meaningful interactions, "is by

using games" (Richards & Rodger, 2014, p.22). According to Hadfield (1984, p. 4) games are defined as, "an activity with rules, a goal, and an element of fun". Moreover, he states that these elements contribute to achieving the purpose of vocabulary teaching (Hadfield, 1984). Therefore, by incorporating games, the teachers can create a lower-anxiety environment so that the students are motivated to acquire the language naturally as well as retain it. This has been further supported by Krashen (1982) who, in his affective filter hypothesis, highlights that anxiety is one of the factors which creates a mental block in the learner by obstructing the way for comprehensible input from being acquired.

Many issues in language learning are mostly a question of grammar. This is confirmed by Khan, Shams & Khanam (2017), as they recognize grammar as the "soul of language and the foundation for producing correct and accurate utterances" (p.4401). The traditional grammar lessons which are conducted using textbooks mainly focus on the underlying concepts and rules, which is clearly ineffective in maintaining the engagement and interest of the learners. Although the students have a passion to learn and speak in the target language, it is evident that the methods used and the monotony of repeatedly memorizing the same word in order to learn the language rather than acquiring, lead the students to feel demotivated with their progress along with the constant pressure exerted by the teachers. Nevertheless, language games, which create a comfortable, exciting, and fun environment, encourage the students to take part in classroom activities, where it naturally allows the students to acquire the language as well as retain the acquired knowledge for a long period. Granger (1982) further claims that grammar games make it possible for students to actively engage in the teaching-learning process. Similarly, according to Clark (1982), games can be used to test and practice language learning in a playful and

enjoyable way. Given that, while the students are engrossed in the activities of the game, subconsciously they acquire language items that are involved and promote communicative language learning through task completion (Skehan, 1998). Therefore, language games are used in this study to examine their success and contribution towards language learning with special attention to the acquisition of grammar, against the traditional teaching method. Moreover, Carter & McCarthy (1988, p. 67) emphasize that “new words are forgotten if they are not recycled in some way and make it into our long-term memory”. Thus, the purpose of this study is to evaluate the effectiveness of the game-based approach against the traditional teaching method in retaining grammar for ESL learners in the Sri Lankan context. The current research investigates answers to the following research questions.

1. Do language games have an impact on grammar retention?
2. Is using language games more effective than using traditional methods in grammar retention?

1.1 Theoretical Base for Acquiring Grammar Through Language Games

1.1.1 The Acquisition Learning Hypothesis

The Acquisition Learning hypothesis is the very first of the five hypotheses developed by Krashen (1982), in which he differentiates the two terms arguing that adult learners develop their competence in the second language by using two independent ways; acquisition and learning. Therefore, the acquisition is identified as a subconscious process that operates in a similar way to how a child acquires the first language, with credits due “to the inbuilt Language Acquisition Device (LAD)” (Krashen & Terrel, 1988, pp.26-27). On the other hand, language learning is a conscious process that focuses

on knowledge regarding the target language rules.

Krashen (1982) further claims to have evidence that, L1 speakers do not ‘learn’ the language but ‘acquire’ it subconsciously as many of them are fluent speakers of their mother tongue without a thorough knowledge of the grammatical rules governing the language. These L1 speakers even feel that ungrammatical sentences are incorrect without the slightest awareness of the violated rules. However, this hypothesis is questionable, when considering ESL and EFL learners who achieve proficiency and become fluent speakers of the target language. Nevertheless, Rohani (2014) argues that “conscious learning and acquisition are not separable” (p.2). She further stresses that “learners acquire the language by learning its rules and being exposed to it at the same time” (Rohani, 2014, p. 2). Accordingly, ‘conscious learning’ provides the learners, be they adults or children, an opportunity to raise awareness regarding different systems in the target language, while the ‘exposure’ part provides necessary examples which are essential to know how the language is being used in the real life. Thus, by considering the importance of this statement, this research identifies language games as a means of exposing students to the target language.

1.1.2 Natural Order Hypothesis

The natural order hypothesis is originally based on the studies conducted by Dulay and Burt (Krashen, 1982, p.12) upon which Krashen (1982) assumes that regardless of the first language of L2 speakers, there is a predictable order in acquiring the grammatical structures. Accordingly, the easiest rules to learn are not the first to be acquired. For instance, advanced learners of a second language fail to apply the rule of adding *-s* to the third person singular, although the grammatical rule is easy to state (Lightbown & Spada, 1999, p.39). Similarly, irregular past is acquired first which is then

followed by regular past. However, it is important to note that, his claim for a natural order mainly depends on “English morpheme order studies which (have) already been demonstrated unsatisfactory” (McLaughlin, 1987, p.44).

Krashen (1982) in his hypothesis has also overlooked the influence of learners L1 on their L2, which leads them to commit predictable grammar errors as well as

becomes the reason for some L2 learners to find it more difficult in learning the target language than the others. Nevertheless, he does recommend neither the classroom activities nor the syllabi be structured based on the findings of the presented studies but by the topics (Krashen & Terrel, 1983, pp. 20-21). Despite these criticisms, the Natural order hypothesis can be used to support the current study which focuses on grammar retention for ESL learners.

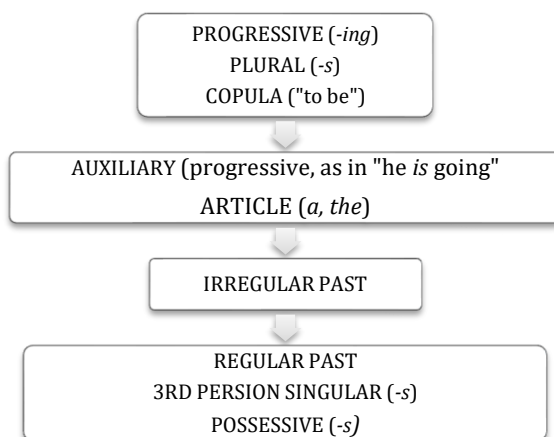


Figure 1. The order of acquiring grammatical morphemes (Krashen & Tarrel, 1983)

1.1.3 Affective Filter Hypothesis

The affective filter hypothesis is closely aligned with the theory of comprehensible input, which asserts that regardless of the input provided, the affective factors become a barrier in the way of effective acquisition. Krashen (1982) highlights the importance of exposing the learners to the target language which is both comprehensible as well as containing structures that are beyond the learner’s current competency level (i+1). Nevertheless, he further stresses the necessity to maintain a low affective filter which allows the comprehensible input to be transformed as acquired language.

Krashen (1982) identifies the variables as; motivation, anxiety, and self-confidence, which become the affective factors for a

learner to be successful or fail in acquiring the target language. Accordingly, learners who are highly motivated, confident, and relaxed are more likely to achieve success than those who are demotivated, less confident, and stressed (pp.31-32). The idea of the affective filter is an imaginary concept, which is "that part of the internal processing system that subconsciously screens incoming language based on" the three variables mentioned (Krashen, 1982, p. 30).

In a second language classroom, motivation is considered highly important. As Quijano (2009) notes, “students with a higher motivation learn the language, obtain higher grades, and reach a higher proficiency level than those who are not motivated to learn” (p.1). Moreover, Normandia (1991, p.1) claims that “poor motivation and the lack of information related to the importance of

mastering language skills have prevented students from learning them effectively". In addition, "learners' anxiety may be affected by the way the teacher delivers the lesson" (Rohani, 2014, p.5). Hence, it stresses the importance of managing a less threatening environment that involves meaningful interaction with the students by ensuring their affective filter is lower enough to let the input in, to facilitate the acquisition.

However, the application of the affective filter leads to disturbing results as Krashen (1982) claims that children are not affected by the filter by forgetting that they too can be subjected to personal feelings as much as those variables become a barrier to some adult learners in acquiring the target language. Despite the claim with regard to a total absence of a filter in children which makes them successful in mastering the L1, leads to further questions such as the means to explain the adults who have achieved native-like proficiency in their L2, in the presence of a filter (Zafar, 2009, p. 144). Thus, by considering the role of affective variables in acquiring the target language effectively, language games are used in this study as a means of managing a classroom with a low affective filter.

1.2 Language Games

1.2.1 What are Language Games?

A game is "an organized activity that has...a particular task or objective, a set of rules, competition between players, and communication between players by spoken or written language" (Richards & Platt, 1992, p. 153). The role of games in the teaching and learning of a foreign or second language has been explored by many researchers. Accordingly, games are classified under different categories. Lee (1995, p. 35) classifies games under the categories of structure games, vocabulary games, spelling games, pronunciation games, number games, listen-and-do games, read-and-do games,

writing, miming & role-play, and discussion games. Similarly, McCallum (1980, p. 74) identifies the categories to be the following: vocabulary games, number games, structure games, spelling games, conversation games, writing games, and role-play and dramatics. El Shamy (2001) defines games as a "competitive activity played according to rules within a given context, where players meet a challenge to achieve an objective and win" (p.15). Further insight is given by Ersoz (2000:6), as he highlights the use of simple structured activities in games, which involve little language but are meaningful to the students at the same time. He also adds the benefit of using games as a means of improving communication skills (Erzos, 2000). In addition, Hadfield (1990, p. 8) claims games to be in one of the following forms: information gap, guessing games, matching games, matching-up games, exchanging games, collecting games, and arranging games. She further classifies language games into two categories as linguistic games, which mainly focus on accuracy; and communicative games, which aim at the successful exchange of ideas and information (Hadfield, 1999). Nevertheless, as Tuan (2012, p. 259) notes, each kind of the above-mentioned games is focused on developing either a particular language skill or a component. Given that, when selecting one, it is important to consider the aim of the lesson, which in this context is to help the learners recall grammar, mainly targeting irregular past tense; thus, a vocabulary game is chosen as the most appropriate, in this study.

1.2.2 Board Race

The Board Race game was created originally to help the students in revising vocabulary, be they words that were just taught or in the previous week. This game can be used at the beginning of the lesson as a means of activating the students and testing their knowledge regarding what they have been taught already.

A study was conducted by Kusumawati (2017) with the objective of “understanding the significance and positive influence of using board race towards students’ vocabulary mastery” (p.113). The sample of this study was 62 Civil Engineering students at Muhammadiyah University of Metro, in the academic year of 2017/2018. The research was carried out in the form of a pre-test and a post-test by taking two classes of 31 students each as the experimental group and the control group.

Once the students were tested on the target vocabulary which included simple verbs, nouns, and adjectives, the average scores of each post-test of the classes using the board race game and the conventional method were compared to identify the differences in scores (Kusumawati, 2017).

The findings of the study showed that the results of the post-test in the experimental group are higher than those of the control group. Given that, Kusumawati (2017, p. 117) claims that “there is a significant influence of using Board Race game towards students’ vocabulary mastery” and there is a positive influence of using the above game towards the vocabulary mastery of students. Moreover, “ELF teaching recipes” (2017) contends that the Board Race game is best played when there are six or more students, and the application of the game to students ranging from the ages of 7-25, proved that the game works well with all age groups.

Therefore, as Boyan and Sherry (2011, p.84) add, “learning through gameplay is a process of (a) learners developing mental models of games and (b) transferring those understandings to academic contexts”.

Thus, this study intends to use the Board Race game by modifying it, mainly to increase the engagement level of the students with the lesson, and to better retain the acquired knowledge.

1.3 Review of Existing Literature

1.3.1 Game-Based Learning in the ESL Classroom

Game-based learning (GBL) is defined by Qian & Clark (2016, p.51) as “an environment in which game content and game play nurture knowledge and skills acquisition, and where game task provides problem-solving platform” by challenging the students with a sense of achievement. It is also considered as one of the methods for implementing learner-centered pedagogy in the classroom to engage and motivate the students (Ghazal & Singh, 2016). Accordingly, the main aim is to master the skills and knowledge as the students master the game (Farber, 2014).

Games play an important role in children’s development and language learning, as they become very engrossed in the competitive aspect of the games and are inspired to work more than they would in other classes (Avedon, 1971), which also contributes to reducing anxiety in the classroom by making the acquisition of input more effective (Amato, 1998 as cited in Azar 2012). According to Kirriemuir-j and McFarlane (2004), young learners need fast, active, and exploratory activities. They further claim, “thus not traditional school-based learning but game-based learning which has the motivational power...to meet the needs of the learners” (Kirriemuir-j & McFarlane, 2004, p. 21). In addition, the findings of the study on the GBL approach concerning students with special needs, stress the positive impact of learning aids on the improvement of students’ performances (Dharmaratne et al., 2015). Hence, games provide many advantages in the ESL classroom.

1.3.1.1 Previous studies on the benefits of using games in language teaching

The analysis of relevant literature brought many advantages of using GBL to light which further stresses the fact that language games

do contribute to creating an engaging classroom where the students are motivated to use their maximum potential in achieving successful language acquisition. Erzo (2000) claims that games are entertaining for learners. Similarly, to Wright, Betteridge and Buckby (1994), games are a means of encouragement for learners to sustain their interest. It is vital to keep the students active with the lesson without which the teachers are unable to provide any input. Nevertheless, Lindfors (1980) emphasizes the significance of raising self-awareness, as it is essential for students to feel secure in the classroom. Accordingly, when learners engage in games of which the basic function is to “intensify human experiences in ways that are relatively safe” (Lexicon Universal Encyclopedia, 1983, pp.27-29), it allows them to explore the tasks freely where the formal learning environment is eliminated. Moreover, as Kim (1995) adds, games offer a welcome break. Therefore, games not only keep the learners engaged with the lesson but also provide the learners with the opportunity to practice the four language skills.

“Well-designed challenges and self-rewarding nature of GBL spur learners to persevere and give their best” (Ghazal & Singh, 2016, p. 3). GBL progresses by providing continuous feedback which directs the learners towards mastering a particular skill or other aspects of the language, for instance: grammar and vocabulary. Naturally, the students try to win or beat the other team, when playing games that ensure their maximum contribution and participation in the activity. Games, therefore, increase the motivation of the students as well as their desire for self-improvement (Constantinescu, 2012). This motivation is essential in language acquisition as the findings of the pioneering study conducted by Gardner & Lambert (1959) showed that “language achievement is not only strongly related to language aptitude but to motivation as well” (p.271).

In the context of GBL, there are many possibilities to encourage imagination and creativity (Ghazal & Singh, 2016). This further stresses that, both the teachers as well as the learners have the ability to use creative ways by incorporating games to teach and learn the lesson, rather than simply asking to memorize different aspects of the language. Thereby, according to Schultz (1988), “students learn without realizing that they are learning”, and thus will use their own creative ways to learn the target language in a meaningful way. Moreover, Gardner (1999) recognizes other benefits of games in language teaching such as (a) Games played with others involve interpersonal intelligence and (b) Games often have a hands-on element, such as cards, spinners, or pieces, which connect with bodily/kinaesthetic intelligence. Therefore, while keeping the real objective hidden, games play a crucial role in various fields when learning and teaching English as a second and a foreign language.

1.3.2 Importance of Games in Teaching Grammar to Young Learners

Learning grammar in the ESL context is considered crucial since having a good command of English does not simply mean mastering the four language skills; reading, writing, speaking, and listening, but also achieving competence in grammar. However, learners of English as a second language, in countries like Sri Lanka, consider grammar learning as a tedious process mainly due to their negative attitude towards it. By highlighting the significance of managing a motivated and engaged classroom where learning grammar becomes more enjoyable, Uberman (1998) shows that when children are engaged in play, they learn the most and the fastest. Similarly, according to Sabatová (2006), “games are surely the most interesting and the most favorite way of how to learn and practice grammar”(p.12). Thus, language games assist in mastering grammar while creating a positive attitude in learners

toward the whole process of language acquisition.

The structural basis of one's ability for self-expression is grammar (Crystal, 2004). Crystal (2004) further states that the more learners are aware of how grammar functions, the more they can monitor its effectiveness and meaning. According to Nedomová (2007, p.17), "young learners are not able to pay their attention for more than 10-20 minutes and after that, they start to be bored and tired", which is true in grammar acquisition since learning depends on "rules and memorization" leading the students to lose motivation and interest. Bekiri (2003, p. 1) adds that when a game is being incorporated into a lesson "it gives a chance to the teacher to help learners acquire new forms and lexis in an effective way".

Grammar teaching in the traditional classroom mainly remains teacher-centered (Chan, 2001) where the students play a passive role while limiting their opportunities to practice the learned lessons. Nevertheless, as Chen (2005) states, grammar games allow students to persuade and negotiate their way to desired outcomes, thereby introducing them to the practical aspect of language learning. Moreover, findings of the study on student-driven grammar learning games by Matas & Natalo (2010) reveal that the students had experienced "a traditional textbook approach previously in grammar learning which lacked both in input as well as engagement to the learning process that expected the students to memorize and repeat what has been taught. However, the research findings proved that the students preferred grammar game-based learning over the traditional method, particularly for three reasons. Using grammar games "provided the students the ownership over the grammar content and learning processes, they were active learners, and they have fun while learning grammar" (Matas & Natalo, 2010, p.376). Given that, some students still preferred passive

learning, using textbooks considering the time-consuming factor of grammar games. Nevertheless, as opposed to the statement that "grammar learning has always been viewed as crucial to language learning but, it is often perceived as a tedious and laborious process" (Pathan & Zamzam, 2014:212), Matas & Natalo (2010, p. 378) claim that, the students felt motivated when engaging in different grammar games and most importantly they did not consider the classroom atmosphere and learning as 'boring' or 'stressful'.

Regardless of the many positive aspects of using games in teaching grammar to young learners, certain factors may affect the success of the students' responses such as "students' perception that game-based tasks are inherently less task focused, and a waste of time" (Matas & Natalo, 2010, p.374). Labrada (2005) further states that when playing grammar-related games, students may use their native language and may feel anxious about making mistakes. Nevertheless, "if a game is chosen wisely, it can help the pupils to acquire words correctly and make them realize that some words are important and necessary in order to complete the games and reach the objectives" (Allen, 1983, p.10).

1.3.3 Vocabulary Retention

"Memory is crucial in vocabulary learning and the benefits of revision and repetition have been clearly demonstrated in studies of vocabulary learning" (O'Dell, 1997, p. 276). Similarly, Rubin (1987) defines learning as "a process by which information is obtained, stored, retrieved, and used" (p.29). Hence, vocabulary retention is linked with vocabulary practice, which stresses the requirement of the teacher's attention towards the "subsequent retrieved experiences" after the "initial encoding of new words" (Rubin, 1987, p. 29). Moreover, research findings on second language acquisition highlight the significance of the

amount of vocabulary exposure to the learners. According to Schmitt (2000), "if learners see or use a word in a way different from the way they first met it, then better learning is achieved" (p.116). Nation (1990) further reveals through his research on vocabulary acquisition, the requirement of students to be exposed to a new word a minimum of five to six times before actually learning it.

Nguyen & Khuat (2003) in their article on Learning Vocabulary through Games, identify the most common perception of people towards vocabulary learning as "learning a list of words and their meaning without any real context". However, this technique of learning has been proven ineffective especially concerning young learners as they would not be able to remember the entire list of words by the end of the day. Decarrico (2001) claims that words should not be memorized nor learned separately without understanding. However, in the school environment, the teachers encourage the students to apply the new vocabulary in sample sentences, leading the students to use them only in similar situations. Given that, Decarrico (2001) further states, "the vocabulary used in such context is simple because grammatical and phonological aspects are emphasized but the lexical aspect is neglected". On the contrary, Wright, Betteridge and Bucky (1994) recognize games as a means of creating various contexts for the students to communicate, in which the repeated activities assist the students to better remember by enabling the learning to be hard-wired into their brains.

"Vocabulary acquisition is related to the effect of repetition on learning" (Laufer, 1997, p. 140), suggesting that, to learn new vocabulary and most importantly to retain them, they should be repeatedly used. This process of recycling not only enables the students to remember them but to increase their understanding of their meaning as well as their use. Ellis (1997) sharing the same

perception states that "games lend themselves well to revision exercises helping learners recall material in a pleasant, entertaining way" (p.134). In addition, Hadfield (1999) recognizes three processes that lead to vocabulary retention as; "(1) fix the meaning of the word in their mind, (2) make the word their own, (3) use the word to communicate with others" (p.91). He further claims that usage of games enables the students to pass through these processes (Hadfield, 1999). Thus, these studies identify repetition as a means of learning and retaining new words and language games as a mode of achieving it.

The use of language games in the ESL context has been investigated broadly, especially in terms of motivating learners and teaching different areas of the language. Conversely, limited focus is given to the retention of grammar when language is being taught using games. Thus, this study intends to address this gap by evaluating the effectiveness of language games as a grammar retention strategy for ESL learners in Sri Lanka.

2 Materials and Methods

2.1 Research Approach and Design

This study was conducted using a mixed methods research approach by integrating both qualitative and quantitative techniques. According to Johnson & Onwuegbuzie (2004), "mixed methods research also is an attempt to legitimate the use of multiple approaches in answering research questions, rather than restricting or constraining researchers' choices" (p.15). Sandelowski (2003) further highlights the two main purposes of using combined methods as: "(a) to achieve a fuller understanding of the target phenomenon and (b) to verify one set of findings against the other". Hence, the questions, of whether there is an impact of language games on grammar retention and is using language games is more effective than using traditional methods

in retaining grammar were answered through quantitative analyses which “deals with measurable data” (Smith, 2012). The qualitative approach was used to further support in answering the research questions, as Merriam (1998) notes, “qualitative researchers are interested in understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world” (p.11).

When considering the research design of the study, two methods can be brought to light. As a qualitative research tool, the observation method was used in this study mainly because other research tools such as interviews and questionnaires were not able to provide reliable data, as the sample group which was selected in this study consisted of students of grade six, who may not be mature to understand the contribution of language games in grammar retention. Therefore, to gain reliable information about the experience and the engagement of the students, the researcher took a participatory stance in a natural setting. As Patton (2002) explains, experimental research, in which the researcher tries to completely control the environment of the study thus contrasts with the naturalistic inquiry. Given that, by covering up the behavioral aspect of the research through observation, where the researcher did not involve herself in the teaching process, mainly to avoid any biases; the research questions were answered. Moreover, the quantitative aspect of the study was fulfilled by conducting a true experiment where the research design depended on statistical analysis either to prove or disapprove the hypotheses, based on the judgment that the “question in hand cannot be solved by any other method of study and always with a definite object in view” (Senn, 1887, p.4). In addition, as Ross & Morrison (2003) state, as far as experimental design is concerned, “there is a comparison between a controlled group and an experimental group on the dependent or outcome variable in a controlled

environment”. Accordingly, the results to be analyzed were achieved from three groups; an experimental group and two control groups, by conducting a pre-test and two post-tests, to make the data and the analysis robust.

2.2 Context and Participants

In the attempt to conclude the research study, the purposive sampling method was used which involved the selection of the sample group based on particular characteristics of a population that are of interest, which will enable to answer the research questions in the most effective way (Oliver, 2015). Accordingly, much focus was given to homogenous sampling that represents, “one particular subgroup in which all the sample members are similar, such as a particular... level” (Lewis & Thornhill, 2012).

Given, the participants of this study were 90 grade 6 students at All Saints’ College, Galle whose first language is Sinhala. All Saints’ College is an only-boys school that is categorized under 1AB (schools with G.C.E Advanced level [Grade12-13] Science stream). Furthermore, it is important to note that, students of grade 6 are particularly chosen in this study, as the focused grammatical aspect, which was irregular past tense, is introduced to the local syllabus in the chosen level.

Then, three classes of the same grade were randomly selected, with 30 students each as the experimental group and the control groups after conducting a pre-test to ensure that they have little or no knowledge of irregular past tense.

While the experimental group was taught irregular past tense by exposing them to a language game called, “The Board Race”, the two control groups were taught the same using the traditional teaching method which does not involve any games.

2.3 Board Race Game

The board race was originally developed as a means of revising vocabulary, however, it was selected and modified in this study, mainly to increase the engagement level of the students with the lesson, and to better retain the acquired knowledge.

The rules of the game were as follows:

- i. Divide the class into two teams and each member of the team must take turns playing the game.
- ii. Next, divide the board into two sections and list down 10 verbs in the present tense on each side.
- iii. Each student of the teams is then expected to read out the verb given on the board and find its respective past form from the 'word basket' given to them.
- iv. This was repeated several times and the team that got the most correct answers was considered the winner.

2.4 Data Collection and Analysis

The selected classes of two control groups were introduced to irregular past tense using the traditional teaching method. Similarly, the same was taught to the experimental group with the only exception of exposing them to the 'Board Race game'. At the end of the lesson, the students were provided with worksheet 1, to be completed within 15 minutes to test their knowledge regarding the lesson. The students were tested again a week after, using worksheet 2, which was designed in a similar format with different verbs, covering up all 20 verbs that were taught in the class. During the fourth week, the students were provided again with worksheet 1, to test their strength of vocabulary retention, in the two settings, in terms of the irregular past tense. At the same time, the three teaching sessions were observed by the researcher, and the findings were noted down focusing on three major components: "behavioral, cognitive and

emotional engagement" (DeVito, 2016, p.8) of the students in the classroom environment.

When analyzing the quantitative data that was collected through a comparison of the three test results which were conducted just after the lesson being taught; at the immediate retention stage and in the second and the fourth weeks since the lesson being taught; at the delayed retention stage, RStudio was used with special focus on the t-test, to help the researcher in identifying how the teaching methods have influenced in the test scores of the sample groups.

Further, the observed primary data II was analyzed in detail using the coding process regarding the experience and engagement of the students in the two settings, which will be discussed in the next section.

3. Results and Discussion

3.1 Introduction

As previously stated, the data collection involved the test scores of a pre-test, conducted at the immediate retention stage, and two post-tests, conducted at the delayed retention stage, by covering all 20 vocabulary items that were introduced during the teaching sessions of irregular past tense. Each test paper carried 10 marks; therefore, the data analysis was based on the scores achieved by the students at the end of the two teaching sessions.

The collected data were then subjected to analysis through the RStudio software. Further, to support the quantitative analysis regarding the behavior of the students, the researcher observed the level of engagement and interest of the sample groups in the two settings: the traditional teaching method and the game-based approach.

Thus, this chapter presents the results of the conducted analysis based on the test scores and observations of the participants.

3.2 Background of the Analysis

The objective of this statistical analysis is to determine whether there is a statistically significant difference between the two teaching methods (i.e. Traditional teaching and Game-based approach) on grammar retention of the students by evaluating the test scores of the selected groups of learners. The t-test will be used to ascertain the significance of the difference and to evaluate the implications of the test scores.

3.2.1 T-test Analysis

T-test analysis is one of the key calculation methods used in the current study by the researcher to analyze the means of the groups to understand whether there is a significant difference between them. The analysis is used as a hypothesis tool where the researcher identifies whether it can be used to understand the overall difference between the two sets of data. Furthermore, it is said that based on the calculation of T- Score, the larger the value will be, there is a drastic improvement in the retention level of grammar by the students of the experimental and control groups; the smaller the value will be, regardless of the game, the retention level is similar when taught using the game-based approach and the traditional teaching method.

3.2.2 Calculation Methodology

The 3 tests conducted on the selected groups of learners included one experimental group and two control groups, under the two different teaching methods, as follows.

- 1). Test at the immediate retention stage, following the lesson (Week 1)
- 2). Test at the delayed retention stage, a week after the lesson (Week 2)
- 3). Test at the delayed retention stage, three weeks after the lesson (Week 4)

3.2.3 Hypotheses

The t-test was used to carry out the statistical analysis with a confidence level of 90% and the null and alternative hypotheses are as follows.

H0: The average test scores of students receiving a games-based approach are equal to the average test scores of the students receiving traditional teaching

H1: The average test scores of students receiving a game-based approach is **NOT** equal to the average test scores of the students receiving traditional teaching

The above hypothesis can be also shown with the notation as below.

$$H0: \bar{X}_E = \bar{X}_C$$

$$H1: \bar{X}_E \neq \bar{X}_C$$

Where \bar{X}_E is the mean test score of the experimental group and \bar{X}_C is the mean test score of the control group

Further, the t-test was conducted across all three weeks, and to remove any bias in the experiment and to make the analysis robust, two control groups were selected (control group 1 and control group 2) along with the experimental group. The descriptive statistics and results of the t-tests can be seen below.

3.3 Descriptive Statistics

Descriptive statistics for a variable are provided by the frequencies, measures of central tendency, and dispersion (Sekaran and Bougie, 2010).

This type of statistics includes the mean, median, mode, standard deviation, etc., and allows the researcher to verify if the responses vary across the scale and identify biases (Sekaran and Bougie, 2010).

Table 1. Descriptive statistics for the Experimental group across the three tests

	Week 1	Week 2	Week 4
Number of Values	30	30	30
min	2.00	0.00	1.00
max	10.00	10.00	10.00
range	8.00	10.00	9.00
sum	194.00	181.00	146.00
median	6.00	6.50	4.00
mean	6.46	6.03	4.86
SE.mean	0.40	0.52	0.53
CI.mean.0.95	0.81	1.08	1.08
Var	4.80	8.37	8.46
std. dev	2.19	2.89	2.90
coef. var	0.33	0.47	0.59

As illustrated in the above table, there is a noticeable difference between the results of week 1 from week 2, week 2 from week 4, and week 1 from week 4. In the first week, at the immediate retention stage, the average of the class is 6.46 which eventually drops to 6.03 in the 2nd week and then to 4.86 during the last week, at the delayed retention stage, respectively. This proves that, although the

game is used for grammar retention, with time, the retention has dropped in terms of average, in the experimental group. However, there is a relatively minute variance when it comes to the 2nd and 4th weeks (8.37-8.46) compared to the 1st and 2nd weeks (4.80-8.37), which signifies that the students were able to answer the questions with an equal level of memory, during the 2nd and 4th weeks.

Table 2. Descriptive statistics for the Control group 1 group across the three tests

	Week 1	Week 2	Week 4
Number of Values	30	30	30
min	2	0	0
max	10	10	9
range	8	10	9
sum	179	162	133
median	6	6	4
mean	5.9666667	5.4	4.4333333
SE.mean	0.4025303	0.5373413	0.5353768
CI.mean.0.95	0.8232669	1.0989863	1.0949686
Var	4.8609195	8.662069	8.5988506
std. dev	2.2047493	2.9431393	2.9323797
coef. var	0.3695111	0.5450258	0.661439

Based on the above results of control group 1, there is a drastic fall in the sum of the whole class when moving from week 1 to week 2 and from week 2 to week 4 (162-133). This can also be explained as a result of the

decrease in mean values from 5.4 in the 2nd week to 4.43 in the 4th week, which further helps in answering the research question, that the traditional teaching method is less effective in retaining grammar for ESL

learners. In addition, a similar pattern in variance as like in the experimental group can be observed where the variance is less significant in week 4 compared to week 2. However, consistent with the results, it can be highlighted that the above results of control group 1 have maintained a confidence interval in the range of 1.09, which indicates the absence of a significant difference in the retention level.

As table 3 indicates, the results of control group 2 are similar to that of control group 1,

where the sum of the class falls from week 2 to week 4 significantly, resulting in the reduction of the mean from 5.53 in the 2nd week to 4.53 in the 4th week, at the delayed retention stage.

Accordingly, the results also show that control group 2 has maintained a confidence interval, which will further improve the reliability of the research by enabling the researcher to state the change in the retention level as valid.

Table 3. Descriptive statistics for the Control group 2 group across the three tests

	Week 1	Week 2	Week 4
Number of Values	30	30	30
min	1	0	0
max	9	10	8
range	8	10	8
sum	176	166	136
median	6	6	5
mean	5.8666667	5.5333333	4.5333333
SE.mean	0.4032436	0.4516466	0.3945996
CI.mean.0.95	0.8247257	0.9237211	0.8070467
Var	4.8781609	6.1195402	4.6712644
std. dev	2.2086559	2.4737704	2.1613108
coef. var	0.3764754	0.4470669	0.4767597

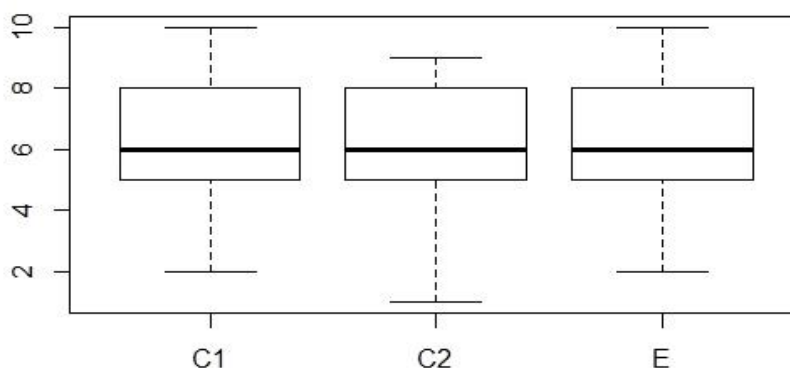


Figure 2. Week 1

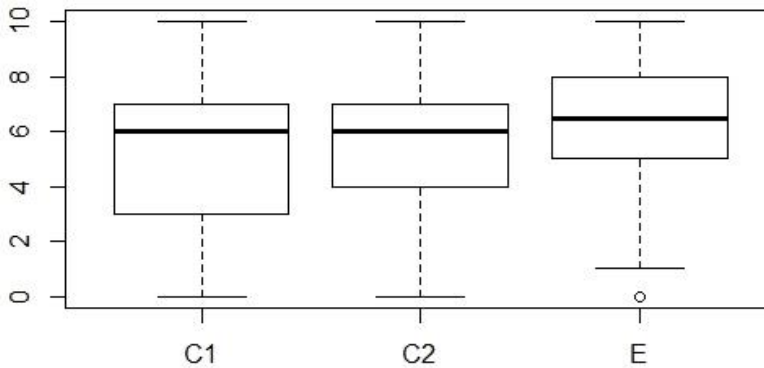


Figure 3. Week 2

3.3.1 Boxplots of the Three Groups Across the Three Tests

The thick horizontal line across represents the median of the corresponding groups.

The results of the first test at the immediate retention stage, following the lesson, show no difference in the spread or median across the three groups except the Control group 2, which has few outliers.

The results of the second test at the delayed retention stage, which was a week after the lesson was taught, show the difference in the

impact of the two teaching methods. As seen in figure 3, the experimental group exhibited both lower dispersion and higher median and mean. Hence, it reveals that the students in the experimental group, who were taught using the game-based approach, performed remarkably, compared to the students of the other two groups: control group 1 and control group 2. It is also important to note that the median and mean values of the two control groups remain identical and below the experimental group eliminating any doubts regarding biases.

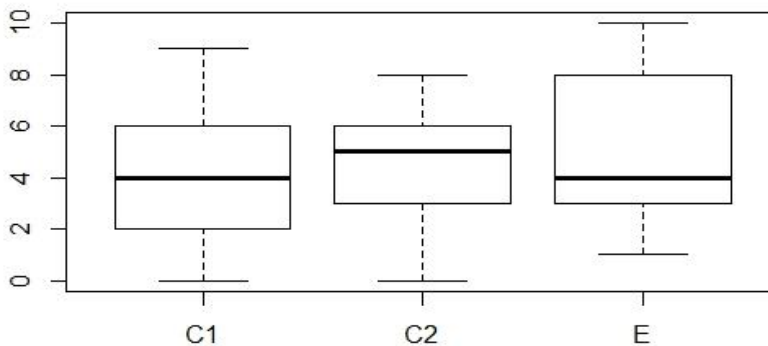


Figure 4. Week 4

The results of the final test (Figure 4) at the delayed retention stage, which was three weeks after the lesson was taught, paint an interesting picture. Although the mean score of the experimental group remains higher than the two control groups, the median is

lower than the control group 2 and the dispersion of scores is higher than both the control group 1 and 2 as confirmed by their standard deviation. The implication of this outcome may point out the ambiguity of the impact of the game-based approach, as it may

only significantly improve the grammar retention of selected students.

Thus, additional research needs to be carried out to identify this characteristic to the full extent.

This test distinguishes the means of two independent groups to conclude whether there is statistical proof that the associated population means are significantly varied (Sekaran and Bougie, 2010).

Table 4. Experimental group vs. Control group 1

Week 1
t = -0.88067, df = 57.998, p-value = 0.3821
Alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:-1.6364707 0.6364707
Sample estimates:
Mean in group C1: 5.966667
Mean in group E: 6.466667

Table 5. Experimental group vs. Control group 2

Week 1
t = -1.0559, df = 57.997, p-value = 0.2954
Alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:-1.7374839 0.5374839
Sample estimates:
Mean in group C2: 5.866667
Mean in group E: 6.466667

3.4 T-tests

The above results represent the mean difference between the two control groups and the experimental group during the 1st week as insignificant. It also indicates a mean value of 6.46 for the experimental group, while the mean values of the two control groups have dropped to 5.96 (Control group 1) and 5.86 (Control group 2). However, this

situation further suggests that although the experimental group performed better than the two control groups, grammar retention was not affected by the teaching methods, whether it was a game-based approach or traditional teaching method, during the 1st week, which was at the immediate retention stage, where the students have performed well only with slight differences in the mean values.

Table 6. Experimental group vs. Control group 1

Week 2
t = -0.84034, df = 57.984, p-value = 0.4042
Alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:-2.1419623 0.8752956
Sample estimates:
Mean in group C1: 5.400000
Mean in group E: 6.033333

Table 7. Experimental group vs. Control group 2

Week 2
t = -0.71925, df = 56.626, p-value = 0.4749
Alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:-1.8922467 0.8922467
Sample estimates:
Mean in group C2: 5.533333
Mean in group E: 6.033333

As indicated in tables 6 and 7, during the second week, which is at the delayed retention stage, the mean difference between the two control groups and the experimental group is more significant than the performances at the immediate retention stage (week 1). Accordingly, it is evident that the students in the experimental group have

outperformed the students in the control group 1, as expected by the hypothesis, which further supports the researcher in answering the research question, that language games are more effective than the traditional method in retaining grammar for ESL learners.

Table 8. Experimental group vs. Control group 1

Week 4
t = -0.57458, df = 57.996, p-value = 0.5678
Alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:-1.942973 1.076306
Sample estimates:
Mean in group C1: 4.433333
Mean in group E: 4.866667

Table 9. Experimental group vs. Control group 2

Week 4
t = -0.50375, df = 53.536, p-value = 0.6165
Alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:-1.6602368 0.9935701
Sample estimates:
Mean in group C2: 4.533333
Mean in group E: 4.866667

Based on the above results of the six t-tests conducted for the three groups, there is no statistically significant difference in grammar retention between the students receiving traditional teaching and the students receiving the game-based approach in either weeks 1, 2, or 4. Thus, the null hypothesis cannot be rejected as the average test scores of students receiving a game-based approach

are equal to the average test scores of the students receiving traditional teaching.

However, as described in the above tables, the mean scores across the three tests; week 1, week 2, and week 4, for the three groups; experimental group, control group 1, and control group 2, show that the group receiving game-based approach has a higher

mean score in Week 1 (6.466667), Week 2 (6.033333) and Week 4 (4.866667), compared to the two control groups during the immediate retention stage and delayed retention stage. This is consistent with the alternative hypothesis that the two teaching methods have different influences on grammar retention, thus providing the answer to the research question that there is an impact of language games on grammar retention for ESL learners in the Sri Lankan context.

3.5 Primary Data Analysis II (Observation)

Apart from the statistical analysis conducted using RStudio to identify the performances of the experimental and control groups based on the test scores, the classroom was also observed, since quantitative data are incomplete at recognizing behavioural factors. Therefore, the researcher observed the students' participation and engagement in the two settings, as the lessons progressed. The observation notes focused on three main factors, namely behavioural engagement, cognitive engagement, and emotional engagement, which were stated by DeVito (2016) as factors depending on students' engagement. Moreover, under behavioural engagement, the observed notes were based on the following traits: "effort, taking initiative, following rules and positive interaction with the teacher and peers" (Collins, 2014 as cited in DeVito, 2016, p.8). Further, as stated by Collins (2014), the student's thoughtfulness and willingness to work were considered under cognitive engagement, while emotional engagement was assessed through the positive or negative reaction to the classroom environment.

3.5.1 Behavioural Engagement

The researcher observed a positive attitude in learners of the experimental group toward the lesson which incorporated the game-based approach. The students were listening attentively to the teacher and were very keen

on learning irregular past tense to win the game. Furthermore, it was evident that the students' interest and engagement were maintained throughout the lesson where they volunteered in answering the questions by raising their hands, even before the question was completed. The researcher also experienced more student-talk during the lesson, which showed that the students felt very much comfortable with the teacher and the classroom. The researcher further identifies, one of the reasons for this positive attitude of learners in the experimental group towards the game-based approach was due to the time factor. Apart from the fact that using games "engage all students in the learning process" (Reyes, 2012, p.709), the researcher also believes that, since the lesson was conducted during the first period for all three weeks, where the students were fresh and ready to learn, it could have impacted the test scores.

However, when considering the two control groups, the teacher had to take an extra effort to make the students talk by repeatedly asking questions. Nevertheless, few students stood up to answer and exhibited a satisfactory level of engagement in the classroom. Moreover, it is important to note that, the lessons were conducted for the control groups during the 5th and the 8th periods, which would have affected their level of engagement with the lesson, which needs further investigation to understand the relationship between the time factor and the teaching methods.

3.5.2 Cognitive Engagement

In terms of cognitive engagement, the students in the experimental group showed willingness in practicing the given list of vocabulary under irregular past tense mainly with the objective of the game. Thus, the game became a motivational factor for the students to engage themselves better in the lesson and to think and respond to provide the right answer. The students in the experimental

group even went to the extent to ask questions from the teacher, when certain points were not clear.

On the contrary, this effort was not evident in the other two groups, where they only followed the provided instructions and considered the classroom environment where the lesson was followed by a question paper, rather stressful and boring, leading to a lack of cognitive engagement.

3.5.3 Emotional Engagement

When considering the positive or negative attitude and the reaction of the students to the classroom environment, the researcher observed positive responses from all three groups towards the teaching materials, the lesson, and the new teachers. However, in terms of teaching and learning, the experimental group exhibited better involvement, since the students were enthusiastic about the new game which followed the lesson. Thus, it can be stated that through games, which provide the hands-on experience the students are motivated to acquire knowledge and retain them in the long term.

In addition, it is noteworthy that, unlike the experimental group, where a majority of the students responded and were involved in the lesson, regardless of their level of proficiency; most of the students who answered and performed well in the two control groups are those who go for private English classes, as informed by the students. This further stresses the fact that the traditional teaching method is less effective in retaining grammar; where the classroom is monotonous, teacher-centered, and lacks motivation.

The comparison and analysis of the collected data, through a pre-test, two post-tests, and an observation; the researcher has come to the following conclusions which will be helpful for an effective teaching and learning experience in the ESL classroom.

As can be seen in Tables 1, 2, and 3, although the scores of all three groups have eventually dropped along with the time, there is a significant difference in the scores of the learners in the experimental group which received the game-based approach, compared to the two control groups. However, it is important to note that, while the results did not show a significant impact of the two teaching methods at the immediate retention stage, the results of the two post-tests at the delayed retention stage show the difference in the impact of the two teaching methods while confirming that language games do have an impact in grammar retention. The findings of this study support the conclusions made by Nation (1990) that, a student needs to be exposed to a new word a minimum of five to six times before actually learning it, which was achieved through the Board Race game, in the current study. Moreover, the comparison of the three test results indicates that the experimental group has exceeded the two control groups with higher mean values, during the immediate retention stage and the delayed retention stage, as shown in tables 4-9 which also confirms that "children learn the fastest when they are at play" (Uberman,1998). These results further reveal that the usage of language games in the ESL classroom leads to effective language acquisition in terms of grammar and retains them in the long term. When considering the researcher's observations, learners of the experimental group showed greater enthusiasm in the classroom from the beginning, which was not experienced in the two control groups. According to Nicolson and Williams (1975), "games are a form of teaching which may be used in situations where ordinary approaches are not effective or of much interest to the students especially when attention is hard to get and harder to keep" (p.1). This was proved in the current study, where the students took active participation in the classroom when using the game-based approach, although it was a grammar lesson

on irregular past tense, which is generally considered as boring (Nedomová, 2007), Given that, the researcher noticed a positive change in the students compared to those of the two control groups which received traditional teaching, when the lesson incorporated a game. Further, the students learning in the game-based approach enjoyed the lesson due to its “elements of fun” (Hadfield, 1990), which creates a comfortable environment where learning is taken place with less anxiety and least disturbance. In addition, the findings indicate the willingness of students in grammar learning when they receive hands-on experience. The teachers need to put extra effort to teach grammar to learners, especially those of younger age since they tend to easily lose interest. Accordingly, Wright, Betteridge and Buckby (1994) state that games assist learners to focus on language development by providing meaningful contexts. Thus, the results of the current study present that, when students are provided with an objective, they are motivated to learn effectively by retaining the target lesson.

4. Conclusion and Recommendation

Therefore, based on the above findings, it can be concluded that, while textbooks assist learners with theoretical knowledge, games can be incorporated to provide the learners with a positive learning experience, leading to grammar retention in the long term. However, it does not mean that games must be a part of teaching in every lesson. Instead, it stresses that it is the teacher’s responsibility to understand the learner requirements and address them appropriately. Since the current study focuses on grammar acquisition, which is often considered as difficult to remember and teach, both by the students and teachers mainly due to the heavy theory it carries, the teachers can incorporate games during those selected lessons, which provide the learners a different atmosphere from the traditional teaching by allowing to absorb the input

effectively. Moreover, when concerning irregular past tense, where vocabulary items have to be memorized; successful results can be achieved through the incorporation of games apart from the textbook, where the students are motivated and provided with an opportunity to apply the words in different ways, than how it was initially seen. The incorporation of games in the lesson also encourages the learners to work in teams through which better learning can be managed than solely from the input of a teacher.

In addition, to achieve effective results by incorporating language games in the lesson, to help the learners in retaining the acquired knowledge, the teacher is assumed responsible for identifying the most appropriate game, to address the learners’ needs and the lesson objectives. As Byrne (1987) points out “the more different games are used, the more motivated students become”(p.31).

The recommendations are stated to provide further insight into how language games can be used in the field of teaching English as a second language to help students in retaining the acquired knowledge.

According to the current study, the results indicate that the scores of the experimental group have exceeded the 2 control groups both at the immediate and delayed retention stages. Thus, the researcher arrived at the conclusion that language games are more effective in retaining grammar in the long term while the traditional teaching method proved less effective in achieving the same results. Given that, the following are the recommendations on how these findings can be used and developed in the future.

The findings highlight the need to increase the sample size and to disperse the sample into different educational zones without confining to one school, which would allow the researcher to identify different learner

needs and the different ways in which language games can be incorporated to fulfill the learner requirements. The expansion of the sample size would also lead to the development of further hypotheses concerning the effectiveness of language games among all learner types from various first-language backgrounds.

This study is mainly focused on the students of grade 6 concerning the subject content which was introduced to them. However, future studies can be undertaken by considering all age groups including the learners of English as a Second Language (ESL) and English for Specific Purposes (ESP) to identify the impact of learner proficiency in grammar retention.

Language games are widely used in the classroom as a technique to involve students in learning. While this paper only focused on one language game “the Board Race”, further research could be conducted through repeated exposure to board games over a period to uncover more significant results.

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