

## EFFECT OF SCRABBLE GAME ON SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENTS IN SELECTED ENGLISH LANGUAGE CONCEPTS IN ILORIN METROPOLIS

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This study examined the effect of scrabble game on secondary school students' academic achievement in selected English language concepts in Ilorin metropolis. The study determined the differences in the academic achievement of students taught English language with scrabble game as well as the differences in the academic achievement of students taught English language with scrabble game based on gender among others. The study adopted a quantitative research design of an experimental and survey methods. Various statistical tools such as descriptive and inferential statistics were employed to answer the research question and test the hypotheses respectively. The results of the findings indicated that: (1) students performed well when taught English vocabulary with digital Scrabble game, (2) gender differences do not exist in using digital scrabble game to teach English vocabulary in Ilorin metropolis also Students have positive reaction to learning English vocabulary with the use of digital Scrabble game. The implication of the findings is that, engagement-based approach like Scrabble game can serves as an alternative approach to engage English language learners in the classroom. Thus, improving students academic achievement and retention. It was therefore recommended that, Scrabble game adoption should be encouraged among teachers and students.

**Keywords:** *attitude; gender; scramble game.*

### INTRODUCTION

The fast evolution of digital technology has infiltrated into several aspects of life. Advances and progress in digital technology has caused simplicity and automation in numerous sectors like in industries, businesses and recently in education. Activities that within the past would take days or could also be months to finish will currently be attended to in an exceedingly matter of hours or could also be minutes. Advancement in technological know- how and its application has resulted in accrued potency of product delivery and additionally shortened the amount between production to the points of disposal. Today's learners are unit digital natives and have new

profile (Prensky, 2009). They grew up with digital technologies and have totally different learning designs, new perspective to the educational method and better needs for teaching and learning. academics face new challenges and need to be compelled to unravel vital problems related to the variation of the educational method towards students' desires, preferences and needs. academics have to be compelled to use different pedagogics and approaches that let students to manoeuvre participants with robust motivation and engagement to their own learning (Abanikannda, 2017). Modern pedagogical paradigms and trends in education, reinforced by the utilization of ICT, create prerequisites to be used of latest approaches

and techniques so as to implement active learning and playful learning (Rodilla, 2012). one among such reforms, trends, and new approach is gamification.

Gamification seems to be a replacement trend in several sectors, alongside business, structure management, in service coaching, health, policy, and education. The term gamification refers to the use of game mechanics in non-gaming contexts (Deterding, Dixon, Khaled, & Nacke, 2011) or, rather, to the event of creating gameful experiences (Koivisto & Hamari, 2014). Games are integral parts of all cultures and one among the oldest sorts of human social interaction. A game is any sort of play, amusement and activity involving competition. Game contains what can engage students and help them enter a state of flow where they are fully immersed within the learning environment and energized to specialise in the activity they are involved in (Koivisto & Hamari, 2014). Gamification represents an innovative and interesting methodology to motivate students and enhance their learning process (Martí-Parreño, Seguí-Masa, & Seguí-Mas, 2016).

Gamification affects students' behaviour, commitment and motivation, which can lead to improvement of knowledge and skills (Hsin-Yuan & Soman, 2013). Gamification is adopted in different contexts and for a variety of purposes. It is used as a driver to promote fundamental things like learning, employee performance, customer engagement, and even crowdsourcing initiatives. According to Huotari and Hamari (2012), the widespread interest that gamification is attracting is based on its potential to strengthen engagement, change behaviours and support innovation. Indeed, an increasing number of services are presently being gamified (Huotari & Hamari, 2012). Gamification is also taking off in education, due to the conviction that it supports and motivates students, and can thus lead to enhanced learning processes and outcomes (Kapp, 2012).

English language competence is taken into consideration as a key factor within the information era, the teaching and learning of the language is gradually changing into the main focus in several countries. This growing stress has resulted in an exceedingly proliferation within the software package (Meyer, 2013). Meyer (2013) argued that integrating games has had an extended history in foreign learning whereby a seamless integration

may lead to accrued motivation and purposeful exposure to the target language. Though the problem of integrating games into formal learning is acknowledged, the author further indicates that there has being a bigger potential for college students to learn from games in their process of language learning as compared to alternative educational subjects (Meyer, 2013).

Lam (2014) asserted that the utilization of gamification could turn learning into a more interesting and interesting activity and assist in improving students' level of attention and persistence also as their attitudes towards learning. This notion is supported by other researchers that fewer than five percent (5%) of scholars are ready to endure the stressful nature of formal school training in languages. Due consideration however must be made before gamifying an activity or a lesson to make sure the objectives of learning are achieved and not overshadowed or downscaled (Lam, 2014).

Lam, (2014) revealed that learning new vocabulary during a second language requires between 5 to 16 exposures. In such a case then, games help provide this exposure as they involve repeated tries and failure (Lam, 2014); however, the study emphasized that this is able to only be achieved with the acceptable use of gamification within the learning. there is a requirement to create tools or strategies that would help reduce the strain that students experience during their learning. Activities structured as games can provide concrete practice for learners, while reducing the strain and anxiety often encountered during the training process. Appropriate use of game elements within the classroom could result not only in enhanced motivation and learning experiences but also facilitate accuracy and fluency in language learners (Lam, 2014).

The idea of using games or games elements in education to interact students within the process of active learning is not new and may be traced back to the sixties when Piaget (1962) acknowledged that games could not only help children to master their environments but also to make the worlds of their imagination. Games also encourage students to play a lively role within the learning process thus supporting active learning, experiential learning, playful learning, and problem-based learning (Oblinger, 2004). Over the years, educators are increasingly incorporating

various games into their teaching curriculum in an attempt to make a fun and interesting learning environment for college kids. Although this will be very challenging and time consuming, interactive, collaborative and competitive games tend to motivate and encourage student participation within the learning process (Martí-Parreño, et al., 2016).

Rodilla (2012) asserted that humans can learn more about objects and other beings in an hour of play compare to a year of conversation. Individuals are born with an innate sense of play as how to explore the planet around and yet traditional school day is meant with clear separations between instruction and play, merely regarding play as a sort of recreation. The potential of a non-constrained play environment seems enough to undertake and mix play and learning (Rodilla, 2012). Rodilla (2012) asserted that schools became increasingly anachronistic institutions and claims for those learning environments that engage students, teach them, stimulate their understanding, and help them assume responsibility for his or her own future learning.

Resnick (2004) moreover reported that people's best learning experiences come once they are engaged in activities that they enjoy and care about. Similarly, Rodilla (2012) reported that students show greater concentration once they are engaged in projects of their interest, finding their own answers, investigating new approaches, exploring other ways of doing things and taking their own decisions. Games like board games are the foremost accurate sort of play within the standard classroom setting. Board games prove the right pathways to playful learning thanks to their dual nature. On the one hand, they are structured, open ended, principled, in order that they allow learners to grant some rules, set methodology and fulfil set goals. Board games are highly enriching activities that provide creative learning and playful exploration. Board games have an extended and rich tradition, being both entertainment and education means in ancient cultures.

The origin of board games return to countries like China, India and Nigeria (Rodilla, 2012). the primary parlor game ever known is Senet and dates back from times of Nefertari, the Egyptian Queen who ruled until 1237 BC. Nefertari was portrayed in one among the wall paintings found within the Valley of the Queens.

It is also in ancient cities in Egypt that first Mancalas, gaming boards made from stone were discovered, carved into the roofs of ancient temples. Pachisi and Chaupar boards and tokens made from rubies and ivory were found in India (Rodilla, 2012). Refined wooden boards for enjoying a game almost like Go were found in China and Japan alongside polished stones. it is curious to ascertain how these early board games are played for thousand years and yet they still provide the inspiration for many classic and current board games (Rodilla, 2012).

A parlor game may be a game that involves counters or pieces moved or placed on a pre-marked surface or board consistent with a group of rules. Games are often supported pure strategy, chance (rolling dice) or a mix of the 2, and typically have a goal which a player aims to realize. Early board games represented a battle between two armies, and most current board games are still supported defeating opposing players in terms of counters, winning position or accrual of points (often expressed as in game currency) (Rodilla, 2012). Board games also improve the students' attention and help them take decisions and risks. As explained by Rodilla (2012), it is important for learners to be ready to act in games when the completion of the sport depends on their actions, strategies, choices and decisions. This researcher's claim also suggests that board games teach during a lasting manner: if students enjoy while learning, they are going to remember the lesson for extended. Additionally, board games grant meaningful communication.

The researcher stated further that this happens because they create a context for language use and that they improve the students' literacy as they supply language practice within the various skills in speaking, writing, listening and reading. There are board games that help learners hook up with Multiple Intelligences (MI) (Gardner, 1999). In fact, it is frequent that one single parlor game embraces variety of various skills. Rodilla (2012) developed this view and remarks that aside from refining students' linguistic intelligence, board games enhance all the opposite six MIs: Spatial; board games especially people who involve drawing and matching help improve the eye-hand coordination also as dexterity and visual perception: number, letters, shape(s) and colour recognition. Logical; they stimulate the brain and prompt critical and

quick thinking and reasoning, rationalization and problem solving, and essential cognitive skills. Mathematical; many board games involve grouping, counting, and calculating, improving learners' numerical understanding.

Vocabulary acquisition is an important part of learning since it is a main component of language proficiency and determines how well learners read, speak, listen and write. Likewise, Lam (2014) opined that words are deemed to be the building blocks of any language with the many role of vocabulary in expressing our thoughts undeniable. Having limited vocabulary often hinders students from mastering the four language skills. A cohesive and rigorous vocabulary bank is therefore a crucial attainment in any language also because the basis of linguistic abilities. Vocabulary is taken into account as a crucial element in learning. In fact, many students feel that vocabulary learning is boring since they need to memorize unfamiliar words and spelling without changing their learning habits, like writing words on paper, learning by memory or learning passively through the teachers' explanations (Darfilal, 2015). The communicative approach, then, encourages students to practice the target language using an infinite range of individual, pair and group work activities. one among these activities is learning through games since it is claimed that it can help students to find out and practice the vocabulary easily and effectively in an amusing classroom atmosphere (Darfilal, 2015).

Previous researches have indicated the first headache or difficulty encountered by students learning a foreign language is usually in remembering words (Hu Hai-peng & Deng Li-jing, 2007). Vocabulary size is an important standard to evaluate a learner's level of English proficiency; without an adequate vocabulary depository, a second language learner's conversational fluency and reading comprehension will encounter difficulties (Schaller, 2006). This has also been emphasized in the study by Hu Hai-peng and Deng Li-jing (2007) on the application of motivation for students' vocabulary acquisition in multimedia environment whereby vocabulary is highlighted as an important part of a language as well as the core or basis of linguistic abilities.

There are many explanations on what defines an academic game nowadays. While some games

are competitive in nature, others may simply allow students to figure together as a category to unravel a general problem where nobody wins or loses. Cruickshank and Telfer (2001) divided games into non-academic or primarily for fun games (including card games, bingo and table-tennis) and academic or primarily for or supported learning games. The latter category is further divided into simulation, during which players work within a simulated environment, and non-simulation, during which players solve problems by using the principles of their topic like scrabble and puzzles, during which players use principles of a topic or discipline and solve related problems, as in math or spelling (Cruickshank & Telfer 2001).

Hadfield (1999) explained two ways of classifying language games; linguistic games that specialize in accuracy and communicative games that specialize in exchanging information. Further, games are classified into more detailed forms composed of both linguistic and communicative games; sorting, ordering or arranging games; information gap games; guessing games; searching games; matching games; labelling games; exchanging games; board games; role playing games. Language games could also be also classified as; listening games; speaking games; kinetic games; and experiential games (Darfilal, 2015). Scrabble is an interactional word-building game, has long been popular among American educators who believe it to assist students develop language and social skills (Martí-Parreñoa, et al., 2016). the thought of using games to interact students within the method of active learning is not new. Over the past several years, educators are increasingly incorporating various games into their teaching curriculum in an effort to form a fun and interesting learning environment for school kids. Although this may be very challenging and time consuming, interactive, collaborative and competitive games tend to motivate and encourage student participation within the training process (Martí-Parreñoa, et al., 2016).

The idea of using games in teaching does not seem to be widely accepted and implemented although its profitability has been proposed and justified in different empirical studies. There has been a misconception that all learning should be

serious in nature. In fact, using games is an important tool that allows language teachers to add colours to their classrooms by providing challenge and entertainment. Games that bring out these higher-level thinking skills are getting more popular, although more research and scientific assessment is important to live their overall effectiveness. There are domains emphasizing gender differences in cognitive activity in playing games such as chess, go, bridge, and Scrabble where the best male players typically outperform the best female players to such a degree that the genders sometimes compete separately and a few competitions are restricted to only females. Charness and Gerchak (1996) proposed that gender differences in chess might be accounted for by the vastly larger number of active male players as compared to female players and thus do not reflect differences in ability between males and females.

Gamification has gained significant interest among educators across the globe, this might be as a result of the characteristics that are inherent in gamification. These characteristics have led teachers to start integrating it into classroom in order to increase classroom engagement globally. Moreover, using games in the English class, which is often considered as one of the best ways to get the students involved in the classroom activities in which their communicative ability is practiced and improved. Language games, together of the foremost valuable and effective techniques in English teaching are used for an extended time by many western teachers. However, they are less used in Nigeria, especially in secondary schools. Most teachers and students think games are a waste of your time or simply a fun activity for youngsters. The general situation of English language teaching and learning at present is not very satisfactory, as incorrect English is still predominantly spoken in a large number of English language learners in Nigeria, and the low achievement in past SSCE exams (WAEC, 2016). So, it is safe to say that there is still a long way to go in English language teaching reform and improving the English teaching quality in Nigeria. It is against this background; this study examined the effect of scrabble game on secondary school students' academic

achievement in selected English language concept in Ilorin metropolis. Specifically, this study aimed to; 1) examine the differences in the academic achievement of students taught English language with scrabble game, 2) examine the differences between the academic achievement of male and female students taught English language with scrabble game, 3) determine students' reaction towards learning English language with the use of scrabble game, 4) determine the differences between male and female students' reaction towards learning English language with the use of scrabble game.

#### *Attitude towards the use of games for instruction*

Research within the area of attitude and attitude formation revealed that attitudes and beliefs are interrelated and attitudes and behaviours are interchangeable; moreover, attitudes are often divided into likes and dislikes (Siragusa & Dison, 2008). With the broad expansion of the mixing of games in education during the last decade, many research studies have explored the attitudes of users (educators and students) towards the mixing of games in education (Gasaymeh, 2009; Mishra & Panda, 2007; Wen & Shih, 2008). Students in developing countries have varying attitudes towards e-learning but generally, their attitudes are positive (Gamal & El-Aziz, 2011). This was corroborated by Nassoura (2012) who acknowledged that a lot of students had positive attitudes towards e-learning because it had a positive impact on their motivation also as self-esteem. Beggs, O'Neill, Virapen and Alexander (2009) examined teachers' perception on the utilization of digital games for instruction, the results of the findings indicated that majority had positive attitude about the effect of digital games in education. Hsu, Lin, Huang, Hsu, Su, Chiou, Tsai, & Hung (2011) also examined preservice teachers' awareness of digital game for learning the results of the findings revealed that participants had positive opinions regarding digital games for education. Also, Hsu et al. (2011) asserted that teachers' attitudes were not influenced by gender differences as revealed by t-test analysis. Similarly, Halver and Gibson (2007) revealed that no age differences exist within the influence of Educational games on the pre-service teachers' attitudes. It is often concluded that both student and teachers in the least educational level were

conscious of the positive potentials of digital games as tools to serve education.

#### *Gender*

Gender differences in mental activity in games like chess, go, bridge, and Scrabble where the simplest male players perform better than the simplest female players to the extent that male and feminine sometimes compete separately and in other competitions are limited to only females. Charness and Gerchak (1996) affirmed that gender differences in chess might be as a results of vastly represented number of male players as compared to female players. Croson & Gneezy (2009) opined that males are more motivated than females to realize than their female's counterparts in any game's competition. Maass, D'Ettole, and Cadinu (2008) indicated that ladies who compete with their female counterparts in any chess achieved but their male counterpart.

#### *Application of Scramble game in English language vocabulary*

Games have significant potential as a pedagogical tool for elementary literacy, this is often because children give maximum concentration if learning is formed active for them (Nielsen 2006). Voinov (2010) affirmed that adults are enthusiastic if games are integrated into learning and scramble games is as popular among the adult in Nigeria as they are among children. These games include Word Search, Sentence Scrabble, and Hangman, all of those sorts of games are purposely created for learning. Hebblethwaite (2009) stated a number of the benefits of Scrabble game which incorporates mental activity that hones cognitive skills, practice in applying economic principles, and therefore the activation of learning in classrooms. Hebblethwaite (2009) and Voinov (2010) also stated other benefits of Scrabble game for instruction which incorporates ability to impact participant and spectators through creative and competitive group literacy. These benefits of scrambles games in instruction is extremely crucial to learning everywhere the planet (Voinov, 2010).

Although games like crosswords and lots of other word games are both enticing and significant for learning language most significantly in English vocabulary learning. However, these games are supported individual effort. Learning English vocabulary with the deployment of Scrabble are

often played during a community of learners, that is important in maintaining a difficult language and acquisition of recent vocabulary (Voinov, 2010). If Scrabble is played by players of varied generations or levels of language fluency, a younger or less fluent speaker will see vocabulary things employed by tons of fluent speakers that he/ she will not have encountered before, or learn word. Mishler and Frank (2002) stated that in Scrabble, the challenge method within which one player contests the word employed by another player, will end in fruitful language learning: A beginner will learn tons from a fluent speaker through the challenge method.

#### **METHOD**

The study adopts a quasi-experimental research design, in which pre-test, post-test non-equivalent group design was used specifically. The design, according to Cook & Campbell (1979), entails the use of non-randomized sample where the researcher cannot randomly sample and assign subjects hence intact classes were used. This is because it was not possible to randomize the subjects of the study without disrupting the school programmes. The population for this study was made up of all Junior secondary school of 2018/2019 session in Ilorin metropolis Kwara state.

The target population was junior secondary school students in JSSI. The choice of the JSSII is based on the fact that the concept to be taught in English Language fall under the syllabus and scheme of work. The sample of this study was made up of seven (7) students from one selected co-educational Junior secondary school in Ilorin metropolis. The school was drawn through purposive sampling, the reason for purposive sampling of the school is to select schools with a believed to share common environmental conditions such as manpower, gender composition, exposure to the use of games, enrolments of students for JSCE examinations for a minimum of 5 years and school type (public schools). The selected school was pre-tested and post tested. At the school level, one intact JSSI class was selected. The sample size of the sample was seven (7) (4 males and 3 females) students captured from the intact class. The captured students from the intact class were pre-tested and post-tested.

A scrabble board game on English language (SBCELV) to serve as the treatment. The scrabble board game was used to teach English vocabulary.

Scrabble is a word game in which two to four players (students) score points by placing tiles, each bearing a single letter, onto a game board divided into a 15×15 grid of squares. The tiles must form words that, in crossword fashion, read left to right in rows or downward in columns, and be included in a standard dictionary or lexicon. In an English-language set, the game contains 100 tiles, 98 of which are marked with a letter and a point value ranging from 1 to 10. The number of points for each lettered tile is based on the letter's frequency in standard English; commonly used letters such as vowels are worth one point, while less common letters score higher, with Q and Z each worth 10 points. The game also has two blank tiles that are unmarked and carry no point value. The blank tiles can be used as substitutes for any letter; once laid on the board, however, the choice is fixed. Other language sets use different letter set distributions with different point values.

An achievement test in English language vocabulary (ATEV) which were researcher structured. Thirty (30) fill-in-the-gap structured scrabble game questions on English vocabulary served as the PTEV. The PTEV was used as a pre-test before treatment, then reorganized to serve as a post-test after treatment. To reduce the retest effect and remove the threats to the internal validity of the instruments, the questions were reshuffled and administered in different random order in the pre-test and post-test.

A researcher-designed questionnaire was used in collecting data to investigate students' reaction towards the use of scrabble game for learning English language in Ilorin metropolis, Kwara state, Nigeria. The questionnaire consisted of two sections; section A would contain the demographic information of respondents while section B contained items on students' reaction towards the use of scrabble game for learning English language in Ilorin metropolis, Kwara state, Nigeria. The items in section B would be rated on modified Likert Mode Scale of Strongly Agree (SA), Agree (A), Strongly Disagree (SD), and Disagree (D) with weighted value of 4 to 1 in terms of scoring.

To test the reliability of the Achievement Test in English language vocabulary (ATEV) instruments, pilot test was conducted within the target population but outside the school sampled for the study. The results obtained from pilot test conducted was used for reliability test. The test was

administered to 6 JSSI students, (3 males and 3 females) randomly selected using test-retest method. Pearson Product Moment Correlation formula was used with the aid of statistical package for service solution (SPSS) to determine the reliability coefficient of ATEV which yielded 0.91. Also, to test the reliability of the students' reaction towards the use of scrabble game for learning English language in Ilorin metropolis, Kwara state, Nigeria, it was administered once on JSS I Students in Ogbomoso and Cronbach's Alpha was used to measure the internal consistency of the instrument which yielded. Hence the result was considered reliable and consistent.

The entire study lasted for two (2) weeks; the experiment for one (1) week due to the period and time allocated to English language in the schools (80mins/week). The actual exercise commenced at the beginning of the first week. The Achievement test in English vocabulary (ATEV) was administered as a pre-test before the use of the treatment (scrabble game) to examine their prior knowledge; the ATEV was then shuffled to serve as a post-test without prior information on the forthcoming test alongside the questionnaire after the experimental group had been exposed to the treatment (scrabble game) to determine the effect of the treatment; The copies of the Achievement test in English language vocabulary (ATEV) was marked by the researcher independently. An achievement test in English language vocabulary (ATEV) which were researcher structured. Thirty (30) fill-in-the-gap structured scrabble game questions on English vocabulary served as the ATEV. The ATEV was used as a pre-test before treatment, then reorganized to serve as a post-test after treatment. To reduce the retest effect and remove the threats to the internal validity of the instruments, the questions were reshuffled and administered in different random order in the pre-test and post-test. The questionnaires were collected immediately after responding to the instrument. Data collected were treated with utmost confidentiality and anonymity.

Ethical consideration was maintained through the period of data collection and thereafter. The researcher ensured that respondents were not coerced to fill the questionnaire and respondents were allowed to participate voluntarily. Also, utmost confidentiality and secrecy of the respondents was maintained during the

administration, collation, and report of research findings.

The data collected were analysed employing a descriptive and inferential statistics. Descriptive design. Moreover, it aims to answer the question what which focuses on the demographic of the study. It is used to define respondent characteristic, data trends, and comparison of groups, validate existing condition and to duplicate research. to deal with the four objective of the study, specific descriptive statistics like percentage, mean frequency and variance were went to analyse demographic information of the participant by gender, Mean achievement of the participant and reaction of the participant to the utilization of scramble game for learning vocabulary in English.

Since the things of the researcher- designed questionnaire was structured on a four-point Likert scale, the choice rule was supported the mid-point of the size 2.50. Therefore, items with mean many 2.50 and above were considered agreed or positive responses while items with below 2.50 were considered disagreed or negative responses. Independent t-test was used to test the stated hypotheses. Independent t-test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Denscombe, 2008). It allows the researcher to compare the mean achievement, reaction of male and female students taught Vocabulary in English using scramble game. All statistical analyses were analysed with the aid of Statistical Package for Social Sciences (SPSS) software version 20.0.

#### *Sample characteristics*

The data collected and analysed in this section represents the variables of focus for the study and background information to examine the effect of scrabble game on secondary school students' academic performance in selected English language concepts in Ilorin metropolis. The demographic

information in which data were collected and analysed includes respondents gender only which is presented on Table 1 as follows:

Table 1 reveals the distribution of respondents that were involved in the study to examine the effect of scrabble game on secondary school students' academic achievement in selected English language concepts in Ilorin metropolis by gender. 4 (57.1%) of the respondents were male, while, 3 (42.9%) were female.

*Table 1. Distribution of respondents by gender*

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	4	57.1
Female	3	42.9
<b>Total</b>	<b>7</b>	<b>100</b>

## **RESULTS AND DISCUSSION**

### *Results*

*Research question one: academic achievement of students taught English language with scrabble game?*

To answer research question one, data were collected to examine the effect of scrabble game on secondary school students' academic achievement in selected English language concepts in Ilorin metropolis based on a pre-test tagged PTEV1 was conducted before introducing Scrabble game, this was done in order to ascertain the respondents' previous knowledge on the concept to be taught. Similarly, a post-test tagged PTEV2 was conducted to ascertain the effect of the Scrabble game on the academic achievement of the respondents. Frequency count and percentage was used to analyse the data collected, while range was used to determine the overall students' academic achievement using Scrabble game based on a benchmark of 0-39, 40-44, 45-49, 50-59, 60-69, and 70-100 to represent fail, poor, fair, good, very good, and excellent respectively. Results of the analysis are shown on Table 2 and interpreted as thus:

*Table 2. Respondents' academic achievement in English vocabulary using scrabble game*

<b>S/N</b>	<b>Pre-Test Achievement (%)</b>	<b>Achievement Level</b>	<b>Post-Test Performance (%)</b>	<b>Achievement Level</b>
1.	70	Excellent	30	Fail
2.	72	Excellent	80	Excellent
3.	40	Poor	17	Fail
4.	95	Excellent	82	Excellent
5.	95	Excellent	89	Excellent
6.	82	Excellent	78	Excellent

7.	83	Excellent	71	Excellent
<b>Total</b>	<b>77</b>	<b>Excellent</b>	<b>64</b>	<b>Very Good</b>

Table 2 shows the academic pre-test and post-test achievement of students taught English vocabulary using Scrabble game; the table revealed that six (6) of the respondents' pre-test percentage scores; 70, 72, 95, 95, 82, and 83 performed excellently, while only one (1) of the respondents' pre-test percentage score of 40 performed poorly. The table also indicated that five (5) of the respondents' post-test percentage scores are excellently based on the post-test scores of 80, 82, 89, 78, and 71, while only two (2) of the respondents failed the in the post-test conducted.

The table revealed a difference in percentage score in both the pre-test and post-test. It could be observed that there are addition and reduction in the pre-test and post-test scores; 72 increased to 80, 95 reduced to 82, 95 reduced to 89, 82 reduced to 78, and 83 reduced to 71. However, they retained the achievement level of excellent. Contrarily, two (2) of the respondents with pre-test scores (70 and 40) and post-test scores (30 and 14) revealed a reduction from achievement level of excellent and

poor to fail respectively. Cumulatively, considering the achievement ranges stated above, a reduction in the pre-test scores and achievement level and post-test scores and achievement level was observed; 77 (Excellent) reduced to 64 (Very Good). Thus, students performed well when taught English vocabulary with Scrabble game.

*Research question two: What is the difference between the academic achievement of male and female students taught English language using scrabble game?*

To answer research question two, data were collected to examine the differences between the achievement of male and female students taught English language with scrabble game. Mean was used to analyse the data collected, while mean gain was used to determine the overall difference between male and female students' achievement taught English language with Scrabble game. Results of the analysis are shown on Table 3 and interpreted as thus:

Table 3. Mean academic achievement of male and female students' in English vocabulary using scrabble game

Treatment	Gender	N	Pre-Test Mean	Post-Test Mean	Mean Gain Score
Scrabble game	Male	4	74.42	50.43	-23.99
	Female	3	83.30	82.67	-0.63

Table 3 indicates the mean academic achievement of male and female students' in English vocabulary using Scrabble game. The table revealed that both male and female students taught English vocabulary using Scrabble game had mean score of -23.99 and -0.63 respectively. This implies that there is a reduction in both male and female students' achievement taught English vocabulary using Scrabble game. Thus, gender differences do not exist in using Scrabble game to teach English vocabulary in Ilorin metropolis.

*Research question three: What is the students' reaction to learning English language with scrabble game?*

In order to determine students' reaction to the use of Scrabble game in learning English vocabulary. A researcher-designed questionnaire was used in collecting data from the respondents. Mean was used to analyse the data collected, while grand mean was used to determine the overall students' reaction to learning English vocabulary with the use Scrabble game. In determining the overall students' reaction to learning English vocabulary with the use Scrabble game, the bench mark of 2.5 of a 4 point Likert scale was adopted. Results of the analysis are shown on Table 4 and interpreted as thus:

Table 4. Mean of students' reaction to scrabble game in learning English vocabulary

S/N	Items	Mean	Decision
1.	Learning English language vocabulary with Scrabble board game is interesting.	3.71	Agree

**Temitayo Omolara Onasanya, Gboyega Ayodeji Aladesusi, & Samuel Adenubi Onasanya**

*Effect of scrabble game on secondary school students' academic achievements in selected English language concepts in Ilorin metropolis*

2.	I tend to develop more interest in the classroom because of the combination of visual impression in the instructional process.	3.14	Agree
3.	Scrabble used in learning English language vocabulary leaves a lot to be desired and I look forward to its use to learn English language in subsequent lessons.	3.28	Agree
4.	The use of Scrabble board game in learning English vocabulary is a waste of time	3.00	Agree
5.	Incorporation of games like Scrabble into English language classes can make the student to be more interested in the classroom lessons.	2.85	Agree
6.	Use of games like Scrabble board game is distracting for learning English language vocabulary	2.86	Agree
7.	Learning English language with gamification is helpful in knowing new English language vocabularies	3.14	Agree
<b>Grand Mean</b>		<b>3.14</b>	

Table 4 indicates the mean responses of students' reaction to learning English vocabulary with the use Scrabble game. Using a bench mark of 2.5, the result revealed that the mean score for each of the seven (7) items on the questionnaire is above 2.5, while, the grand mean score of the seven (7) items is 3.14. This indicates that students have positive reaction to learning English vocabulary with the use Scrabble game.

In order to determine the differences between male and female students' reaction towards learning English language with the use of scrabble game. A researcher- designed questionnaire was used in collecting data from the respondents. Mean was used to analyse the data collected in order to determine the difference between male and female students' reaction towards learning English vocabulary with the use Scrabble game. In determining the overall students' reaction to learning English vocabulary with the use Scrabble game. Results of the analysis are shown on Table 5 and interpreted as thus:

*Research question four: What is the difference between the reaction of male and female students taught English language using scrabble game?*

Table 5. *Mean of male and female students' reaction to scrabble game in learning English vocabulary*

Gender	N	Mean	Standard Deviation
Male	4	3.29	.30
Female	3	2.95	.16

Table 5 revealed that male students have a more positive reaction to learning English vocabulary with the use of scrabble game with the mean score of 3.29 which is higher than the female mean score of 2.95. This shows that male students have a more positive reaction to learning English vocabulary with the use of scrabble game.

*Hypothesis one*

H<sub>01</sub>: There is no significant difference in the performance of male and female students taught English language using scrabble game.

*Results of hypotheses tested in the study*

The results of hypotheses tested in this study are presented in subsequent tables. All hypotheses were tested at significant level of 0.05.

Independent sample *t*-test was conducted to compare the performance of male and female students taught English language using scrabble game. Data collected was analysed and tested at 0.05 significant level. Results of the analysis are shown in Table 6 with subsequent interpretation.

Table 6. *T-test analysis of male and female students' achievement taught English vocabulary using scrabble game*

Gender	N	X	SD	df	T	Sig. (2-tailed)	Remark
Male	4	62.42	28.48	5	-1.18	.29	Accepted
Female	3	82.99	8.41				

From Table 6, it can be deduced that there was no significant difference between the achievement of male and female students taught English language using scrabble game. This is reflected in the findings of the hypothesis tested  $df (5), t = -1.18, p > 0.05$ . Thus, the hypothesis which states that “there is no significant difference in the achievement of male and female students taught English language using scrabble game” is accepted. The result of the hypothesis is in line with the result of research question two, which states that gender differences do not exist in using Scrabble game to teach English vocabulary in Ilorin metropolis.

*Hypothesis two*

$H_{01}$ : There is no significant difference in the reaction of male and female students taught English language using scrabble game.

Independent sample *t*-test was conducted to compare male and female students’ reaction to learning English vocabulary with the use of Scrabble game. Data collected was analysed and tested at 0.05 significant level. Results of the analysis are shown in Table 7 with subsequent interpretation.

Table 7. *T-test analysis of male and female students’ reaction to learning English vocabulary with the use of scrabble game*

Gender	N	X	SD	df	T	Sig. (2-tailed)	Remark
Male	4	3.29	.30	5	1.67	.15	Accepted
Female	3	2.95	.16				

From Table 7, it can be deduced that there was no significant difference between male and female students’ reaction to learning English vocabulary with the use of Scrabble game. This is reflected in the findings of the hypothesis tested  $df (5), t = 1.67, p > 0.05$ . Thus, the hypothesis which states that “there is no significant difference in the reaction of male and female students taught English language using scrabble game” is accepted.

performed well when taught English vocabulary with Scrabble game. This clearly shows that instructional media when properly integrated into teaching and learning is capable of stimulating learning and encourage active learning in the classroom thereby increase students’ overall achievement in the classroom.

*Discussion*

This study examined the effect of Scramble game on academic achievement of students in English vocabulary using Scrabble game in Ilorin metropolis. The findings revealed that a difference in percentage score in both the pre-test and post-test. It could be observed that there are addition and reduction in the pre-test and post-test scores; 72 increased to 80, 95 reduced to 82, 95 reduced to 89, 82 reduced to 78, and 83 reduced to 71. However, they retained the achievement level of excellent. Contrarily, two (2) of the respondents with pre-test scores (70 and 40) and post-test scores (30 and 14) revealed a reduction from achievement level of excellent and poor to fail respectively. Cumulatively, considering the achievement ranges stated in table 2, a reduction in the pre-test scores and achievement level and post-test scores and achievement level was observed; 77 (Excellent) reduced to 64 (Very Good). Thus, students

This study agreed with the previous study of Hebblethwaite (2009) and Voinov (2010), whose study affirmed that Scrabble board game offers an excellent opportunity of learning English vocabulary concepts and presenting an intense mental activity that offers cognitive skills, practice in applying economic principles, and the activation of language learning in classrooms, thus improving language skills of learners and increasing performance. This study also concur with the previous findings of Glover (2013) whose findings affirmed that the application of scramble games in the classroom may be stimulating and motivating for the new generations of students that have grown up in the age of video games.

The findings of this study validate the earlier study of Oblinger (2004) whose study indicated that games encourage students to play an active role in the instructional process, thus, supporting active learning, experiential learning, and problem-based learning. Extant literature suggests that educational games (EGs) like jigsaw puzzle games represent a promising tool in gamification. Glover (2013)

concluded that among the reasons that have been pointed out for the use of games in education is that EGs may be appealing and motivating for the new generations of students that have grown up in the age of video games.

Objectives 2 examined the difference between the academic achievement of male and female students taught English language using scrabble game. The findings of this study revealed that the gender differences do not exist in using Scrabble game to teach English vocabulary in Ilorin metropolis. It was revealed from the findings that the nature of Scrabble game which involved intense mental activity and engaging both male and female students simultaneously helps in bridging the gender gap that use to exist in English vocabulary performance. This finding contradict the previous findings of Halpern and Wai (2007) whose study reported a significant lower Scrabble rating for female compare to male scrabble players. Similarly, the findings was inconsistent with the previous findings of Croson & Gneezy (2009) whose study concluded that males are more motivated than females to achieve than their female's counterparts in any game's competition. Maass, D'Ettole, and Cadinu (2008) also indicated that women who compete with their female counterparts in any chess game achieved less than their male counterpart.

Objective 3 determined students' reaction to learning English language with scrabble game. This study revealed that students' reaction to learning English vocabulary with the use Scrabble game is positive. This means that student would prefer the use of games to other traditional means of instruction in the class room. These findings agreed with the previous study of Goehle (2013), whose study opined that students indicate positive increase in level of their engagement and interest which ultimately transformed to better performance and reaction to Scrabble game. The study found that no significance difference existed between the academic performance of male and female students taught English vocabulary using Scrabble game in Ilorin metropolis. Both male and female students taught English vocabulary with the use of Scrabble game performed very well. This finding is in contrast with the study of McCarthy (2008), Lubinski and Benbow (2006), and Tierney (2005), the researchers concluded that most players in Scrabble tournaments are female, however, the

higher ratio of female to male players cannot explain the male advantages in Scrabble game, in fact, the researchers explained that one would predict females will be more prevalent than male at the performance level but opposite is the case.

## **CONCLUSION**

The results of the findings indicated that scramble game has positive effect on academics achievement of the students and there is no significant difference between male and female students taught English language using scramble game. Based on the findings of this study, it can be deduced that the findings of this study averred that academic achievement in English vocabulary can be increased with the utilisation of Scrabble game through the intense mental activity that learners engage in while playing the game and instructional assignment should be assigned to students without any gender bias. Similarly, the use of Scrabble game in the teaching of English vocabulary is learner and gender friendly. Hence, the need for Scrabble game in the English language classroom is quintessential in order to maintain an interesting, engaging, interactive, entertaining and fun filled classroom, and help learners to gain better learning experience without gender consideration.

In interpreting the results of the study, some limitations regarding methodological aspects can be stated. First, this study used a self-structured questionnaire to elicited information on student's reaction to the use of scramble game for learning English language vocabulary, which brings opportunities for response bias. Second, the sample only included students from JSS One. In addition, the sample size was relatively small. These two factors suggested several precautions in the generalization of the findings of this result. Furthermore, it should also be noted that the measurement scale used needs to be re-tested for future studies. Hence, based on the findings and conclusions of this study, the following recommendations were made. First English vocabulary teaching and learning should be conducted in an engaging, fulfilled and entertaining manner using scramble game, this is because, English vocabulary are better understood when its learnt in an entertaining manner. Second, Scrabble game adoption should be encouraged among teachers and students. This will provide avenue to learners to learn in a personalised,

individualised, and self-paced level, which will in turn translate to better academic performance, School proprietors should embrace and provide entertaining and interactive games such as Scrabble game to the school. Since, it creates better learning experience and offer a reality of experience that stimulates self-activity.

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**Temitayo Omolara Onasanya, Gboyega Ayodeji Aladesusi, & Samuel Adenubi Onasanya**

*Effect of scrabble game on secondary school students' academic achievements in selected English language concepts in Ilorin metropolis*

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