GAMIFYING ENGLISH VOCABULARY INSTRUCTION: An Experience in Back-draw Vocabulary Game

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ABSTRACT

This study determined the effect back-draw vocabulary game on students' achievement in English vocabulary. It also examined gender difference in vocabulary achievement of students exposed to back-draw vocabulary game. The study the pretest-posttest control group, quasi-experimental research design. The instruments used for collecting data were English Vocabulary Achievement Test(r=0.78) and instructional guide containing lesson steps of Back-draw vocabulary game. The intervention lasted four weeks. Data were analysed using descriptive statistics and independent t-test at 0.05 level of significance. Results revealed that there was a significant difference in vocabulary achievement of students exposed to vocabulary games and those in the control group (t(1;181) t= 8.59; p<.05). Students in the experimental group (15.36) obtained a higher mean score than the control group (10.96). The study recommended that Gamification and Game-based learning should be adopted in teaching other aspects of English Language like summary, essay, and phonics.

Keywords: Gamification, Game-based learning, Draw-back, Vocabulary instruction Achievement

INTRODUCTION

One of the most vital aspects of any language is its lexicon. This is what is referred to as the vocabulary of a language. Vocabulary is defined as a collection or stock of words which is considered vital for language development and acquisition and it is recognised as an essential factor in verbal and written communication. It can also be described as the ability to use words in the generation and understanding of sentences (Fishley,2021;Adebakin,2024). Vocabulary mastery is a necessity for learning listening, speaking, reading and writing. Knowing vocabulary items in a passage give readers a good sense of meaning and information which will make reading fruitful. Vocabulary knowledge is necessary at all stages of development, but vocabulary demands of texts increase substantially beginning at the upper primary school level, when students have increased exposure to reading text and make vocabulary acquisition a critical subskill. If a child is unfamiliar with the meaning of words in a text, comprehension will suffer (Read, 2018). At the senior secondary level, students become more vulnerable to difficulties with reading due to the higher reading demands involved in the curriculum, especially those children with vocabulary weaknesses(Adediran,2019). In the words of Nagy (2015),"the primary difficulty with sustaining early gains in reading is the lack of adequate vocabulary to meet broad academic demands of higher levels" (p. 3).

The relationship between vocabulary knowledge and reading has been found to be mutually beneficial at improving text comprehension. For example, Silverman and Hines(2019) argue that increase in a learner's vocabulary will lead to improved reading comprehension, and increase in reading will also lead to an improvement in the learner's vocabulary size. The same position was re-echoed by Fakeye (2018) with the submission that there was a direct relationship between students' vocabulary knowledge and their depth of reading comprehension. Therefore, pedagogical instruction in reading comprehension must be planned to integrate English vocabulary as an important component. Apart from incorporating vocabulary into the teaching of reading, teachers of English language need to demonstrate the mastery of the reading skill and introduce innovations in the teaching of this skill in schools from time to time. Thus, there is a need for extensive and integrative teaching of the reading comprehension passages in English language classrooms to include text-based factors such as spellings, vocabulary, pronunciation, synonyms and antonyms among others. Similarly, instructional practices in reading comprehension can be planned to stress the connection between vocabulary and reading, especially how vocabulary size and vocabulary knowledge can be used to extract meaning and achieve comprehension of the passage. Stahl (2022) posits that vocabulary has causal relationship with comprehension provided that the vocabulary can be easily accessed through practice during instruction. Stahl concluded that vocabulary knowledge plays a critical role in EFL/ESL learners' instruction in reading comprehension.

Vocabulary knowledge is more than just reading words or studying of individual words and its learning cannot occur in a vacuum; the meaning of a word cannot be acquired in isolation. Knowing words is multi-dimensional and the process occurs over time. Meaning resides in the intentional problem-solving and thinking process of the reader that occurs during an interaction with a text (Adebakin,2024). The content of meaning is influenced by the text and by the readers' prior knowledge and experience that are brought to bear on it. Therefore, effective instruction in vocabulary will take into account the student's development in reading words correctly, knowing the meaning of a word within several different contexts, using words in reading as well as writing, using word learning strategies and being conscious. The National Reading Panel (2000) identifies the components of reading as phonemic awareness, phonics, vocabulary and comprehension. Thus, vocabulary holds a special place among these components. Vocabulary acquisition is a developmental skill that cannot be fully mastered at once. The expansion and elaboration of vocabulary items are something that extends across a life time.

Sonsut (2017) reports that the biggest obstacles for secondary school students were that: they engage in lower levels of independent reading, they lack strategies to learn words from context, and have a "less complete" knowledge of word-meanings altogether (p. 60). Thus, students' ability to read and comprehend depends on the number of words they know or are exposed to. Clearly, students with limited vocabularies tend to perform poorly not only in literacy but also in content area of studies. The influence of vocabulary on students' comprehension of text has been demonstrated overtime through various studies (Nation, Snowling and Clarke 2017; Adebiyi,2022; McGregor,2022). Reading is a crucial form of communication through which we get most of the information required in teaching, learning situations and in everyday life. As noted by Okunade (2015), people learn by reading, not through drill and practice, but by free volition and in the way learners become readers. A good reader focuses on increasing vocabulary. In fact, one of the problems of comprehension is students' poor reading ability which should be improved through vocabulary because the students need to get used to the reading skills. To do so, the teacher has the responsibility of finding out an alternative way to solve the problem in reading comprehension.

Vocabulary difficulties being experienced by senior secondary school students have been linked to the use of ineffective instructional strategy by English language teachers. These strategies largely expose students to dictionary or lexical meaning of words instead of exposing them to arrays of meaning. In the conventional strategy, students are often taken through predetermined sets of vocabulary items which are then taught in isolation. There is general absence of systematic, explicit vocabulary instruction as vocabulary instructions are often unplanned, incidental and primarily driven by students' questions. When students encounter unfamiliar words, they are directed to the glossary or dictionary or given a quick oral definition. Given the pivotal role of vocabulary in reading comprehension, it is surprising that, typically, very little class time has been allotted to vocabulary instruction in schools (Fishley,2021; Read, 2018; Oji,2024; Okunade,2015). There has been minimal focus on vocabulary instruction in language learning classroom. This has limited students' exposure to long term learning. This kind of vocabulary instruction of teaching words in isolation rather than in contexts of reading comprehension could only result in limited and shallow knowledge of words and their functions in reading comprehension classroom because word study is taught in a monotonous way (Fakeye,2016). Vocabulary teaching and learning, therefore, remain a constant challenge for teachers as well as students.

In Nigeria, where students come from different cultural backgrounds and use English as a second language, students often develop high memory strategies but less vocabulary strategies (Fadimilehin,2010). This often leaves students struggling with concepts and makes them unable to make progress. Many in turn feel frustrated with their vocabulary learning. According to Enu (2016), the conventional strategy used in schools to teach English vocabulary is not effective as teachers rarely stimulate students to give positive response based on students' needs, interest and habits. The teacher focus less on making vocabulary instruction fun in class..

Vocabulary acquisition is a process which occurs overtime as students make connections to other words, learn examples and non-examples of the words and use the word accurately within the context of the sentence(Fadimehin,2010). Further still, the ability to effectively decode and extract meaning of words in reading texts is the goal of teaching/learning vocabulary. An individual's ability to read efficiently is tied to his or her vocabulary power. Scholars (Mountain,2015; Oji,2024) aver that teachers' choice of instructional strategy, among others, can influence students' vocabulary acquisition in any reading task or exercise. Fakeye (2020) argues that the teaching of reading should incorporate explicit teaching of word meanings because it is crucial to teach them to get meaning from their reading. It is important that teachers of English language pay attention to gamification when teaching English vocabulary as an aspect of English Language in schools.

In spite of the mutually beneficial relationship between vocabulary and reading comprehension, most Nigerian ESL students have difficulties learning English vocabulary which, invariably, accounts for their poor performance not only in literacy but also in content area studies. In the words of Adediran (2019), students find it difficult to develop new vocabulary items and lack a stock of lexical sequence such as phrasal verbs, idioms, collocations and sentence frames. This has a major effect on their ability to convey ideas in appropriate terms. They also find it a serious challenge assigning correct meaning to words and phrases even when such words and phrases are used contextually. A similar picture has earlier been painted among students who are native users of English by Schmit (2019) with his submission that most college students do not have good knowledge of words association. As a result, they often use words indiscriminately such that what they write is way different from their intended meaning. Beyond passing examinations, poor or limited vocabulary knowledge of English Language could also inhibit Nigerian ESL students from contributing, in a robust manner, to spheres of national life such as in social, economic and political discourse.

In spite of the indispensability of vocabulary to human survival, most Nigerian students, especially at the senior secondary school level of education at public schools, find it difficult to read and comprehend English printed texts. This, according to Enu (2016), is largely due to limited vocabulary knowledge of the average Nigerian students learning English as a second language. According to Carlisle (2020), the average native English K-11 students may know thousands of words, while their counterparts in English-as a-Second-Language (ESL) contexts may only know a few words in English. This submission is corroborated by Umendu (2015) and Akinsowon (2016) with their findings that senior secondary school ESL students in Bayelsa and Oyo States, respectively exhibited shallow vocabulary knowledge which accounts for their inability to comprehend reading texts. Also, the problem of poor vocabulary development of the Nigerian senior secondary students is highlighted in West Africa Examinations Council (WAEC) *Chief Examiner's Reports* (2023). It is reported that the vocabulary knowledge of many candidates is very shallow as they could not identify correct synonyms and antonyms of given words. The reports then recommended that teachers of English Language should intensify the teaching of vocabulary to boost students' communication skills

The vocabulary problems of Nigerian ESL secondary school students are further highlighted in the West Africa Examinations Council (WAEC) *Chief Examiner's Reports* (2024). The deficiencies exhibited by students in vocabulary is captured in the WAEC *Chief Examiner's Report* (2024) as follows:

> Many of the candidates assigned unimaginable meaning to words. They could not suggest correct synonyms to words. A candidate cannot understand the content of a passage unless he understands the meaning of the words used... Pg. 8.

From the foregoing, it can be concluded that acquiring and using an extensive range of vocabulary is a great challenge for English-as-a-second language learners as those in senior secondary schools in Ibadan and this limits the extent to which they could oral and written discourse. This study focuses on Ibadan because more than 50% of the total number of secondary schools in Oyo State are located in Ibadan. It, therefore, stands to reason that the problem of poor performance at public examinations might be most felt in Ibadan. On account of the above situation, it is recommended that teachers should encourage their students to build up their vocabulary. It is also recommended that teachers at the senior secondary level should expose candidates to speech, vocabulary development as well as lexis (WAEC, 2024). From the above reports, it is glaring that vocabulary learning is an issue that requires urgent attention. It is also worthy of note that the challenges highlighted and the solutions proffered by the Chief Examiners have remained the same each year till date. This further confirms the need for interventions with vocabulary games in the teaching of English vocabulary.

Scholars, in efforts to address the problem of incidental and limited vocabulary instruction, experimented with various student-centered strategies. These include componential analysis(Fakeye,2006), Information and Communication Technology (ICT)-assisted instruction (Fakeye,2010), memorisation (Fadimehin,2010),semantic feature analysis (Adebakin,2024) and List-Group-Label (Enu,2016) strategies among others. However, most of the studies on vocabulary instruction did not involve students in gamification through the use of games that make vocabulary instruction fun-filled. Therefore, this necessitates making gamification as an integral part of vocabulary instruction by actively engaging the students. In order to achieve this, the use vocabulary games is strongly canvassed.

Games are a universal aspect of human experience irrespective of culture and have dated back to the existence of man. Akdogan (2017) defined a game as any competitive physical or mental activity governed by rules, especially engaged in for the purpose of entertainment and directed towards an explicit goal. A game is a rule-

based social environment that is responsive to the players' actions, offers an appropriate task to the player and keep a record of the player's accomplishments (Akinyemi, 2021). Games have goals which are usually broken down into short-term achievable objectives in form of challenges that give players a seamless progression through the use of frequent rewards that act as external motivators. Participation in games is however usually voluntary, intrinsically motivated and primarily for enjoyment.

Games are fun activities that promote interaction, thinking, learning, and problem solving strategies. Games are effective tools for learning because they offer students a hypothetical environment in which they can explore alternative decisions without the risk of failure. Thought and action are combined into purposeful behavior to accomplish a goal. Playing games teaches us how to strategize, to consider alternatives, and to think flexibly (Martinson and Chu 2018). Games have a great educational value and it can be used in the classroom to make learners use the language instead of just thinking about learning the correct formulas. Games encourage learners to interact, cooperate, to be creative in using the language in a meaningful way. Learners want to take part in activities; to play games and are generally ambitious. In order for them to take part, they must be able to understand and communicate in the target language(Akinyemi, 2021).

Games also encourage learners to keep interested in the work and a teacher can use them to create contexts in which the language is useful. Games are used as methods or techniques to involve students in learning. Well-chosen and designed games are invaluable as they give students a break and at the same time allow learners to practice language skills. Annisa (2023) identifies the advantages of using games to learn vocabulary in the classroom: a) Games add relaxation and fun, so the learners retain words more easily. b) Games involve friendly competition, so it keeps learners interested and motivated. c) Vocabulary games bring real world context to the classroom. Akdogan (2017) emphasizes similar points by saying that it encourages active learning, as well as collaboration and interactivity. Interactive learning techniques also hold memory, performance, and social benefits. According to Akinyemi (2021), the benefits of using games in language learning include that games are learner centered, encourages creative and spontaneous use of language, and foster participatory attitudes of the learners and create fun. Among effective vocabulary games documented in the literature are back-draw, stand up and shout and word puzzles to mention a few of them.

The integration of games into education have been discovered to be more effective than conventional methods in increasing students' motivation, enhancing behaviour and active participation among students (Kirikkaya, *et al.* 2010). Vocabulary games have the potential of improving the process of learning by virtue of its engagement, motivation, role playing, and repeatability. It advocates the promotion of learning through real-life situations and the shaping of concepts through experiences.

Students are able to make mistakes in a risk-free setting, and through experimentation. They actively learn and practice the right way to do things. This keeps them highly engaged in practicing behaviours and thought processes that can be easily transferred from the simulated environment to real life. Martinson and Chu 2018) showed that students demonstrated positive attitude towards the use of educational card game in science learning. This could be based on the fact that learning through games allows students to be in charge of their learning as well as stimulate active involvement, collaboration and competition during the course of instruction. Turan *et al.* (2016) and Adedeji (2017) also reported that students have positive perceptions about gamification strategies. In addition, Yien, Hung, Hwang and Lin (2011) reported that students who were taught using game-based learning strategy performed better in terms of academic achievement and attitude than those taught using conventional approach

Statement of the problem
Research has, shown that most Nigerian senior secondary school students are deficient in English vocabular. Vocabulary difficulties being experienced by the students have been linked to the use of ineffective instructional strategy by English Language teachers. Scholars, in efforts to address the problem of poor English vocabulary achievement, have experimented with various student-centered strategies such as semantic mapping, word mapping, componential analysis, morphemic analysis and semantic gradient among others. However, these instructional strategies did not make learners use the language instead of just thinking about learning the correct formulas. Studies have affirmed effectiveness of gamification in English Language instruction in general and vocabulary instruction in particular. Therefore, this study determined the effects of back-draw vocabulary game on English vocabulary achievement of senior secondary school students in Ibadan Metropolis, Nigeria. The moderating effects of gender on the dependent measure was also examined.

Objectives of the Study

The specific objectives of the study were to:

1. determine the difference between the vocabulary achievement of students exposed to back-draw vocabulary strategy and those taught with the conventional vocabulary instructional strategy.
2. examine the difference between the vocabulary achievement of male and female students exposed to back-draw vocabulary strategy.

Hypotheses

Ho1: There is no significant difference between the vocabulary achievement of students exposed to back-draw vocabulary strategy and those taught with the conventional vocabulary instructional strategy

H02: There is no significant difference between the vocabulary achievement of male and female students exposed to back-draw vocabulary strategy.
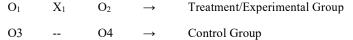
Scope of the Study

The study determined the effect back-draw vocabulary game on students' achievement in English vocabulary. It also examined gender difference in vocabulary achievement of students exposed to back-draw vocabulary game . The study covered senior secondary two students from two public senior secondary schools purposively selected from Ibadan metropolis, Nigeria. The vocabulary items taught were taken from comprehension passages drawn by the researcher from the Intensive English Course for Senior Secondary Schools two by Oluikpe (2011).

Significance of the Study

The study is significant in that it revealed the effectiveness of Contextual redefinition and Vocabulary self-collection instructional strategies in enhancing English vocabulary and comprehension achievement of senior secondary school students thereby helping them to increase their word knowledge and unlock the meaning of texts. Also, the study has acquainted English language teachers with effective strategies of teaching vocabulary to improve students' reading comprehension. The study has also contributed to efforts at raising the quality of English vocabulary and comprehension instruction in schools.. Finally, academics, researchers and students would find the study to be a significant contribution to existing research in English Language teaching and learning.

METHODOLOGY

The study adopted the pretest-posttest control group, quasi-experimental research design. It examined the effects of back-draw vocabulary strategy, on students' achievement in and attitude to vocabulary in English language. The design is represented as follow;

$$O_1 \quad X_1 \quad O_2 \quad \rightarrow \quad \text{Treatment/Experimental Group}$$

$$O3 \quad -- \quad O4 \quad \rightarrow \quad \text{Control Group}$$

O_1 and O_3 are the pretest observations for experimental group 1, experimental group 2, and control group respectively.

$X_1 \quad \rightarrow \quad$ Treatment I (Back-draw vocabulary game)

$-- \quad \rightarrow \quad$ Conventional Instructional Strategy

O_2 and O_4 are the posttest observations for experimental group and control group respectively

The two largest local government areas(Ibadan North and Ibadan Southwest LGAs) were purposively selected from Ibadan Metropolis. From each of the LGAs, two public senior secondary schools were randomly selected, making four schools. Four intact classes of SSII (two per school) were purposively selected and assigned to Back-draw vocabulary game and conventional strategy. The instruments used for colleting data were English Vocabulary Achievement Test(r=0.78) and instructional guide containing lesson steps of Back-draw vocabulary game. The intervention lasted four weeks. Data were analysed using descriptive statistics and independent t-test at 0.05 level of significance.

RESULTS

Testing the Hypotheses

Ho1: There is no significant difference between the vocabulary achievement of students exposed to back-draw vocabulary game strategy and those taught with the conventional vocabulary instructional strategy

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Table 1: T-test showing significant difference between the Vocabulary Achievement of Experimental and Control Groups

Variable	Mean	Std. Dev.	N	Df	t	P	Remark
Vocabulary Game Control Group	15.36 10.96	1.4	96 87	181	8.59	.008*	Sig.

*Sig. at .05 level

Table 1   showed that there was a significant difference in vocabulary achievement of students exposed to vocabulary games and those in the control group ($t_{(1;181)}$ t= 8.59; p<.05).   Hence, the hypothesis is rejected. The experimental group (15. 36) obtained a higher mean score than the control group (10.96).

Ho2: There is no significant difference in the vocabulary achievement of male and female students in the experimental group

Table 2: T-test Comparison of male and female students' Vocabulary Achievement in the Experimental Group

Variable	Mean	Std. Dev.	N	Df	Calculated t	P	Remark
Male students Female students	10.68 8. 59	2.72	95 86	181	2.05	.041	Sig.*

*Sig. at .05 level

Table 2 revealed that there was a significant difference in the vocabulary achievement of male and female students in the experimental group($t_{(1;181)}$ t= 8.59; p<.05). Hence, the hypothesis was rejected.   The male students (10. 68) obtained a higher mean score than the control group (8.59).

Discussion of findings
The result indicated that there was a significant difference in students' achievement in English vocabulary of experimental and control groups. This implied that students exposed to back-draw vocabulary games performed better in English vocabulary than the control group. The t-test result showed that students in back-draw vocabulary game had a higher mean score than those in the control group. The effectiveness of back-draw vocabulary games could be the fact that students were able to interact with one another and also because they have to earn points both individually and in groups which promote healthy competition among them. Learning vocabulary development in English Language with back-draw vocabulary games requires good time. The finding is in agreement with that of Yien, Hung, Hwang and Lin (2011) that students who are taught using back-draw vocabulary games strategy performed better in terms of academic achievement and attitude than those in control group. The findings support that of Turan, Avinc, Kara and Gaktas (2016), that the experimental group students who were taught using gamification had better achievement scores and attitude than those taught using the conventional approach. Also no significant gender difference was found in students achievement in English vocabulary. This means that back-draw vocabulary game strategy equally benefitted male and female students.

Conclusion
The study determined the effect back-draw vocabulary game on students' achievement in English vocabulary. It also examined gender difference in vocabulary achievement of students exposed to back-draw vocabulary game. Students were able to attain their learning goals through the effectiveness and productivity of back-draw vocabulary game strategy thus making them perform better in vocabulary instruction. Thus, back-draw vocabulary games strategy was effective in enhancing students' academic achievement in English vocabulary.

Recommendations
Since the effectiveness of back-draw vocabulary game strategy in enhancing students' achievement in English vocabulary has been established, the following recommendations are made:
1.   Teachers should adopt the use of back-draw vocabulary game strategy to teach English vocabulary.

2.   Parents and guardians of students should source for educational games especially in the area of vocabulary development in English Language which students can play with at home and with peers in order to enhance their vocabulary achievement.

3.   Government should seek the service or give contract out to game experts to design games that are relevant to our environment and that can be used to teach English vocabulary in schools.

4.   Game experts should design relevant indigenous games that can be used to teach vocabulary development in schools.

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