

Game-Based Pedagogy and Vocabulary Development Skills of Pupils' with Reading Difficulties in Calabar Municipality, Cross River State, Nigeria

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Abstract: Reading difficulties remain a major challenge affecting primary school pupils' academic performance. The study investigated the effect of Game-based pedagogy on Vocabulary Development Skills of pupils with reading difficulties in Calabar Municipality. The study adopted a quasi-experimental research design with pre-test-post-test non-randomized control group design. The population of the study comprised 94 primary one pupils identified with reading difficulties randomly assigned to experimental and control groups. A sample size of 37 RD pupils in three intact classes were used in the study. Two public primary schools in Calabar Municipality were randomly sampled using Cap and Draw method and all the RD pupils in the two schools participated in the study. The experimental group was taught using game-based instructional strategies such as Word-Matching game for 2 weeks, while the control group received conventional instruction. Adapted Reading Difficulty (RD) diagnostic checklist, Pupils performance test on Vocabulary Development Activity Test (VDAT) and Instructional (treatment) package on Word-Matching Game were the instruments used for data collection. Data were collected and analyzed using Mean and standard deviation for answering research questions while Analysis of Co-Variance (ANCOVA) was used to test the hypotheses at .05 level of significance. The results of the analysis revealed significant difference in academic performance of RD pupils taught context clues, word analogy and structural analysis with the help of Word-Matching Game. The reading game was found to be more effective in improving the vocabulary development skills of pupils with reading difficulties. Some recommendations were made to include that teachers should embrace the 21st century skills by effectively using diverse instructional strategy for enhancing vocabulary development outcomes among pupils with reading difficulties.

Keywords: Games, Vocabulary Development Skills, Reading Difficulties.

1. INTRODUCTION

English Language is essential in education, politics, technology, tourism and commerce and focuses on four language skills: listening, speaking, reading and writing. These skills are supported by language elements such as structure, vocabulary, pronunciation and spelling. However, vocabulary development is the foundation of language learning. It enables learners to understand texts and communicate effectively in both spoken and written forms. Without adequate vocabulary and reading skills, learners cannot comprehend texts or express themselves clearly. Vocabulary refers to the ability to figure out the meaning of a word in a sentence. It has several components among which are: context clues, word analogy and structural analysis. These components help the learners to accurately recognize words which are a key ingredient of reading acquisition. Therefore, strong vocabulary development are necessary for effective communication (Spencer and Maris, 2010).

Games have emerged as a significant tool in literacy education, particularly for beginning readers. The incorporation of games not only aids in the recognition of sight words but also foster a positive attitude towards reading, which is critical for long term literacy success. Vocabulary development is a critical component of early literacy development as it enables learners to figure out words accurately and comprehend text more effectively. It is a critical component that enables learners to make sense of texts and engage with content meaningfully (Tijms, 2023).

One of the significant benefits of games in vocabulary development is the ability to create interactive and engaging learning environments. These games often incorporate elements such as storytelling, problem-solving and critical thinking which encourage learners to actively participate in the learning process. For instance, games that require players to make predictions, draw inferences, or summarize information can help learners practice and reinforce their vocabulary skills in a fun and dynamic way. However, such interactive experiences are more effective than traditional instructional methods, as they allow learners to explore and manipulate content actively (Tijms, 2023).

A variety of game-based approaches can be employed to foster vocabulary development. Word games, such as scrabble and Baoggle, challenge learners to manipulate letters and create words, reinforcing spelling and word recognition skills. Interactive online games and mobile applications offer engaging platforms for vocabulary practice and reinforcement. These digital tools often incorporate multimedia elements, such as images and audio, to enhance learning and cater to diverse learning styles. Additionally, role-playing games and simulations can create immersive learning environments where learners use new vocabulary in context (Manzano, Ait, Rodriguez & Aguilar, 2023).

One of the primary advantages of games in vocabulary development is the ability to create a motivating and enjoyable learning environment. These games often incorporate elements such as timed challenges, rewards, and competition, which encourage early stage learners to identify words in a fun and engaging way. For instance, games that require players to figure out word meaning can help reinforce their decoding skills and improve their overall reading fluency. The author emphasizes that such interactive experiences are more effective than traditional practice as they allow learners to engage with texts actively and receive immediate feedback on their performances (Masigan, 2020).

An instructional games approach may improve the engagement and motivation level for children with reading difficulties. Tijms, 2023, rightly argues that accelerating the development of struggling readers needs to include a motivational component of reading engagement, as it is this component that will allow children to maintain and possibly increase gains in skills. Using games with under-served learner groups with specific skill needs, such as literacy, can help them feel confident and more. Therefore, game-based learning may be an approach for educators to adopt to teach vocabulary development.

One way to support vocabulary development and help learners with reading difficulty is to build word vocabulary games through the use of context clues. Context clue is the ability of a learner to figure out word meanings or an unknown word in a sentence. The use of context clues is a comprehension aspect that can help learners improve their word identification proficiency in texts.

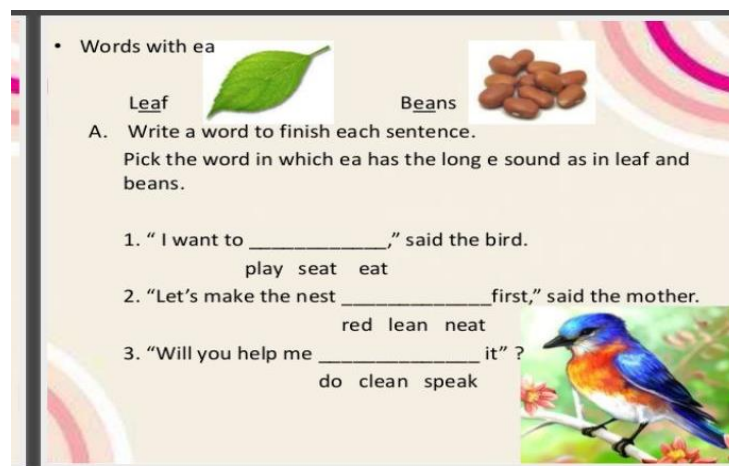


Figure. 1: Context Clues of Sentence Structure

The ability to use contextual information to determine the meaning of written content is a strategic skill in word identification, fluency, and comprehension that is required of all learners as they progress to different grade levels. Using context clues recognition may be more beneficial to students because once a child can decode easily, more attention can be paid to building meaning (Allen, 1998). When context clues are combined with other clues such as phonics and word-part clues (for example, the sounds associated with J and MP), accurate word recognition is usually possible (Green, Beiderman and Faraone, 2001).

Al-Sharafat and Abu-Seileck (2012), studied web-based games with fifth grade English Language students in Jordan who had difficulty in reading. They observed significant gains in reading and writing skills and higher retention of vocabulary with their experimental group when compared to the control group who received traditional instruction. The online games included context clues, word searches, synonyms and antonyms and word recognition. Ellasa, 2015 conducted a study to explore junior high school students' attitudes towards the context clue strategy in learning vocabulary. The findings showed that students had positive attitudes towards the use of context clues to learn new English vocabulary both inside and outside the school.

Ilter (2022), investigated the effect of games in the use of context clues to infer the word meanings from context on the reading comprehension of fourth –grade elementary school students in turkey who had difficulty with reading comprehension. The intervention results indicated that after the instruction, the pupils' performance in reading comprehension scores increased significantly.

Word Analogy teaches children how and when to make use of rhyme units to read unfamiliar words. Word analogizing involves using known words or word parts as an aid for identifying unknown words. For instance, if I know the b sound in ball, and I know the word cake, I can identify a new word; bake, cat; mat, man, van (Barone, Hardman, and Taylor, 2010). Many teachers encourage developing readers to use analogy strategies by engaging learners in word family e.g (man, ran, pan). One clear advantage to the use of analogy strategy is that vowels which vary in the sound they represent are much more stable within rhymes (Johnson and Baumann, 2000).



Figure: 2: Word Analogy showing rhyming words

There is quite a lot of evidence that rhymes are functionally important units for young readers of English. For example, a child who knows how to read a word like “break” could use this word as a basis for reading other words with shared spelling segments such as peak, weak and peak or bean, bead and beat. In order to use a word like “beak” as a basis for reading a new word like “peak”, the child is making a prediction about the pronunciation of the new word that is based on the shared rhyme. When learners ability to use a word like “beak” as a basis for reading analogous words like “peak” and “bean” it is assessed experimentally and it turns out that rhyme analogies are easier.

A study was carried out by Goswami (2001), who used an analogy experiment on 5, 6 and 7-year-old children to play a clue game about working out words. In this game, the children learned to read clue words such as “beak”, and were asked to read new words like “peak” and “bean”, using their clue to help them. The children were pretested on the later words prior to learning the clue words, and the clue words remained visible during the testing phase, to make sure that the children did not forget them. The results showed that words like “peak” were easier to read by analogy and was found to improve their performance in vocabulary skills. Also a study was carried out by Paramita (2017) on the Use of Matching Words Game to improve students’ understanding of word analogy clues. The result of the study showed an improved performance and was shown to be effective in increasing students’ understanding.

Structural analysis is the process of breaking words down into their basic parts to determine word meaning (i.e., prefixes, suffixes, roots, etc.). Structural analysis is a powerful vocabulary tool since knowledge of a few word parts can give clues to the meanings of a large number of words. When learners come across an unknown word that is made up of more than one syllable, they can use structural analysis cues to divide that word into pronounceable units. Structural analysis skills can allow students to focus on the larger units of letter patterns within words.

GAR / DEN	WA / TER	BA / BY
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Figure 3: Structural Analysis showing word syllables

When using structural analysis, the reader breaks words down into their basic parts. For example, the word banana can be broken down as ba-na-na. Also the word ‘unable’ is divided into ‘un’ as a prefix and ‘able’ as a word root. Thus knowing how to break a word down into its component parts and syllable is crucial to reading comprehension. Researchers have found that learners with reading difficulties can enhance their vocabulary development and reading comprehension and better understand 60% of unfamiliar words by applying learned knowledge of affixes and word roots (Chung, 2012). The author added that one way educators can increase skills in structural analysis and actively engage learners is to use word play and games. The games help students understand the meanings of affixes and roots through combining independent affixes and roots to create words and taking part in word sorts centered on common word roots. After developing meaning of the roots and affixes, learners use the meaning to create sentences with the words to form word games.

Sousa, 2011) conducted a study on 5th graders ability to recognize words using structural analysis. The authors found that the students reading errors were reduced when they were instructed in a structural analysis based strategy. Therefore, learners frequent structured fluency practice incorporated into their academic lives to decrease the effect in reading and increase overall academic success. Also, Archer, Gleason and Vachon, (2000), conducted a five weeks study to measure the reading fluency of 6th graders using structural analysis. The authors opined that the learners decoding levels increased by 1.72 grade levels, instructional reading levels increased by 1.45 grade levels, while the reading fluency rates were increased by 28%. Therefore, increasing reading fluency is a critical aspect of improving vocabulary skills of learners with reading difficulties.

2. THEORETICAL FRAMEWORK

Theory of Gamified Learning by Richard Landers (2015)

The theory of gamified learning by Richard Landers (2015) was considered relevant to this study. The theory reveals that learners who engage with a task more often, produce greater knowledge and skill than those who do not practice. Many games increases student time-on-task as one of the primary motivations for incorporating games in the classroom. Landers introduced the theory of gamified learning to explain the casual paths by which gamification intervention can affect outcomes for learners across a wide variety of contexts. This theory describes two specific processes by which gamification can be used to affect learning outcomes: a mediating process and moderating process. Incomplete consideration of the psychological processes involved can result in gamification appearing to fail to achieve intended results. However, failures can in fact occur at multiple points, and the fault is only sometimes due to design evaluation.

This theory is relevant to this study as it will help learners with reading difficulties come in contact with new ways and methods of learning where it provides them with the appropriate path to improve their learning outcome in the context of education and training. However, when they are fully engaged in the game, they can construct their own learning, think critically and gain attention on what is presented to them. This implies that designers working to build a scientific literature of gamification must identify the target process carefully and only decide upon an appropriate instructional design and rigorous evaluation strategy of that process.

Research Problem

Although vocabulary development is an important skill for academic achievement and lifelong learning, one of the major challenges that learners face in school is their inability to learn from context and synthesize information. Learners with reading difficulties have problems with understanding text, have poorer inference making skills, and struggle to infer the meanings of unknown words while reading. Having poorer inference-making skills leads to confusion while reading thus, the reader becomes passive in the act of reading and because of their limited vocabulary and poor comprehension skills, performance in English Language tends to suffer.

However, in addressing reading difficulties, should teachers adopt 21st-century instructional approaches? This involves using techniques, strategies, media and methods that make learning more interactive and engaging while also capturing and sustaining learners' attention. Can game-based tools such as matching-word game increase pupils' engagement and motivation? Furthermore, can the use of design elements such as colours and pictures simplify complex or abstract concepts for learners? It is against this backdrop that the researcher poses the question can 'word-matching games be used to improve the vocabulary development skills of primary one pupil's with Reading difficulties in Calabar Municipality Area of Cross River State, Nigeria'?

Purpose of the Study

This study was to determine the effects of Word-Matching Game on the Vocabulary Development Skills of pupils with Reading Difficulties in Calabar Municipality Area of Cross River State, Nigeria. The study addressed the following research questions:

1. How do pupils taught Context Clues with the help of Word-Matching Game and those taught with expository method differ in their academic performance?
2. How do pupils taught Word Analogy Clues with the help of Word-Matching Game and those taught with expository method differ in their academic performance?
3. How do pupils taught Structural Analysis Clues with the help of Word-Matching Game and those taught with expository method differ in their academic performance?

Hypotheses

The following null hypotheses were formulated to guide the study

1. There is no significant difference in the Performance of pupils' taught Context Clues with the help Word-Matching Game and those taught with expository method.
2. There is no significant difference in the performance of pupils taught Word Analogy Clues with the help of Word-Matching Game and those taught with expository method.
3. There is no significant difference in the performance of pupils taught Structural Analysis Clues with the help of Word-Matching Game and those taught with expository method.

3. METHOD

The study adopted a quasi-experimental research design using pre-test post-test non-randomized control group design. The study was conducted in Calabar Municipality Area of Cross River State, Nigeria. The population of the study comprised 94 primary one pupils with reading difficulties in the 23 public schools in Calabar Municipality. A sample size of 37 pupils with reading difficulties was used in the study. Two public primary schools in Calabar Municipality were randomly sampled using Cap and Draw method and all the pupils in the two schools participated in the study. In the two schools, 15 were in the experimental group while 22 were in the control group.

The following instruments were used to gather data for the study. Adapted Reading Difficulty Diagnostic Checklist (ARDDC), Pupils performance test on Vocabulary Development Activity Test (VDAT) and Instructional (treatment) package on Word-Matching Game. ARDDC Diagnostic Checklist and Vocabulary Development Activity Test (WRPT) were trial tested on 19 pupils who were not part of the main study. The instruments were subjected to face and content validities. The content validity was established using test blue print. The face validity which had a 15 item questions was given to three experts, one English Language specialist, one lecturer in the Department of Educational Technology and one

expert in Test and Measurement. In order to establish the reliability of the instruments for this study data were collected, coded and analyzed using Kendall's Coefficient of Concordance for ARDDC which yielded coefficient index of .83, while Kuder Richardson Formula-21 was used to determine the internal consistency for Reading Comprehension Activity Test (RCAT) which yielded a coefficient index of .87 which considered the instruments reliable and suitable for the study. Descriptive statistics of mean and standard deviation were used in answering the research questions while analysis of Co-Variance (ANCOVA) was used for testing the hypotheses at .05 level of significance.

a. Nature, Content and Response type of ARDD Checklist

The ARDD checklist was adapted. The checklist had 10 items in all. It is expected that if a teacher marked 7 out of the 10 items on the checklist the pupil was termed an RD pupil; and if any pupil scores less than seven, the pupil was not termed an RD pupil. For the purpose of this research, the classroom teachers were directly involved with the selection of the RD pupils and were expected to assess them based on the checklist and tick the options that best described the pupil's behaviour by marking either 'yes' or 'no' where applicable. These, the researcher confirmed the checklist for each pupil by conducting a random observation at different intervals on each of the pupils termed RD pupils.

b. Pupils Performance Test (Pre-test and Post-test on Vocabulary Development Activity

Test)

The performance test was developed by the researcher based on the scheme of work for the term with the help of the teachers in primary one. The instrument was used for pre-test and post-test on the pupils identified with reading difficulty characteristics. The Vocabulary Development Activity Test (VDAT) had unequal numbers for each of the activity: six items for context clues, five items for word analogy and four items for structural analysis. This gave a total of fifteen items and each item attracted two marks, which gave a total of thirty marks. The questions in pre-test were not different from the questions in post-test.

c. Description of Word-Matching Game Instructional Package

Word-Matching Game was the instructional game designed to teach the pupils Vocabulary Development skills for two weeks (Context clues, Word analogy and Structural Analysis). The game is perfect for pupils with reading difficulties because it's visual, hands-on, and low-pressure. It is a game designed to help learners connect words, meanings, and ideas from a passage to improve vocabulary and understanding. It also teaches children patience and turn-taking. Word-Matching game includes the following activities:

PHASE 1: PREPARATION

1. **Select a passage:** Choose a short passage 100-150 words at the pupils' reading level. It should contain 8-10 target words.
2. **Prepare Matching Cards:** Make 2 sets of cards:

Set A: Target vocabulary and key phrases from the Passage e.g. generous, lost, village, main problem.

Set B: Select synonyms or sentences from the passage e.g. kind and gives to others, could not be found, where the story happened, the goat was missing.

3. **Shuffle the cards:** Mix Set A and Set B separately and place them face down on the table/floor

PHASE 2: PLAYING THE GAME

4. **Pre-Reading:** Read the passage aloud to pupils twice. Ask them to listen for the target words.
5. **Explain Rules:** "You will pick one card from Set A and one from Set B. If they match, you keep the pair and explain how it relates to the story"
6. **Game Play:**
 - Pupils take turn in pairs or small groups
 - Pupil 1 flips one Word Card and one Meaning Card

- If they match correctly, the pupil must: 1. Read both cards aloud 2. Use the word in a new sentence or point to where it was used in the passage

- If correct, they keep the pair and get 1 point. If wrong, cards are turned face down again.

7. **Winning:** The game ends when all pairs are matched. The pupil/team with the most pairs wins.

PHASE 3: POST-GAME VOCABULARY CHECK

8. **Vocabulary Link:** After matching, ask 3-4 questions using the matched words. Example: 'We matched 'generous' with 'kind and gives'. Why was Amina called generous in the story?'

9. **Reinforcement** Pupils write 3 sentences using 3 of the matched words from the passage

4. RESULTS

Research Question 1

How do pupils taught Context Clues with the help of Word-Matching Game and those taught with expository method differ in their academic performance?

Table 1: Mean and Standard Deviation of Pupils' Academic Performance Taught Context Clues with Word-Matching Game and Expository Method

Context Clues	N	Pre-Test		Post-Test		Gain Score
		$\bar{X}_1$	SD ₁	$\bar{X}_2$	SD ₂	
Word-Matching Method	15	2.92	1.29	5.38	2.10	2.92
Expository Method	22	2.67	1.15	3.81	1.54	1.14

The result in Table 1 indicated that the mean performance gain score of pupils taught Context Clues using Word-Matching game is 2.92 while that of pupils taught using expository method was 1.14. The mean gain score difference between the two groups is 1.78 in favour of pupils taught context clues using Word-Matching game. Therefore, there is a difference in the performance of pupils taught context clues using word-matching game and expository method.

Research Question 2

How do pupils taught Word Analogy with the help of Word-Matching Game and those taught with expository method differ in their academic performance?

Table 2: Mean and Standard Deviation of Pupils' Academic Performance Taught Word Analogy with Word-Matching Game and Expository Method

Word Analogy	N	Pre-Test		Post-Test		Gain Score
		$\bar{X}_1$	SD ₁	$\bar{X}_2$	SD ₂	
Word-Matching Method	15	2.77	.99	5.54	1.73	2.77
Expository Method	22	2.67	.97	3.53	1.40	0.86

The result in Table 2 indicated that the mean performance gain score of pupils taught Word Analogy with Word-Matching game is 2.77, while that of pupils taught using expository method was 0.86. The mean gain score difference between the two groups is 1.91 in favour of pupils taught Word Analogy using word-matching game. Therefore, there is difference in the performance of pupils taught Word Analogy using Word-Matching game and expository method.

Research Question 3

How do pupils taught Structural Analysis with the help of Word-Matching Game and those taught with expository method differ in their academic performance?

Table 3: Mean and Standard Deviation of Pupils' Academic Performance taught Structural Analysis with Word-Matching Game and Expository Method

Structural Analysis	N	Pre-Test		Post-Test		Gain Score
		$\bar{X}_1$	SD ₁	$\bar{X}_2$	SD ₂	
Word-Matching Method	15	1.38	1.10	4.46	1.90	3.08
Expository Method	22	2.47	1.08	3.52	1.40	1.05

The result in Table 3 indicated that the mean performance gain score of pupils taught Structural Analysis with Word-Matching game is 3.08, while that of pupils taught using expository method was 1.05. The mean gain score difference between the two groups is 2.03 in favour of pupils taught structural analysis using Word-Matching game. Therefore, there is difference in the performance of pupils taught Structural Analysis using Word-Matching game and expository method.

Hypothesis 1

There is no significant difference in the performance of pupils taught Context Clues with the help of Word-Matching Game and those taught with expository method.

Table 4: Analysis of Covariance of the difference in the Performance of Pupils Taught Context Clues Using Word-Matching Game and Expository Method

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	76.97 ^a	2	38.49	15.50	.00
Intercept	37.49	1	37.49	15.10	.00
Pretest	48.15	1	48.15	19.39	.00
Teaching Method	21.25	1	21.25	8.56	.01
Error	109.24	34	2.48		
Total	1216.00	37			
Corrected Total	186.21	36			

a. R Squared = .413 (Adjusted R Squared = .387); F-Crit = 2.01

The result in Table 4 reveals that the calculated F-value of 8.56 is greater than the critical F-value of 2.01 at 1 and 45 degrees of freedom and at .05 level of significance. With this result, the null hypothesis was rejected. Hence, there is significant difference in the performance of pupils in context clue taught with the help of Word-Matching Game and those taught with expository method.

Hypothesis 2

There is no significant difference in the performance of pupils taught Word Analogy with the help of Word-Matching Game and those taught with expository method.

Table 5: Analysis of Covariance of the difference in the Performance of Pupils Taught Word Analogy Using Word-Matching Game and Expository Method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	65.13 ^a	2	32.57	14.97	.00
Intercept	40.19	1	40.19	18.48	.00
Pretest	17.98	1	17.98	8.27	.01
Teaching Method	43.98	1	43.98	20.22	.00
Error	95.72	34	2.18		
Total	1172.00	37			
Corrected Total	160.85	36			

a. R Squared = .405 (Adjusted R Squared = .378) ; F-Crit = 2.01

The result in Table 5 reveals that the calculated F-value of 20.22 is greater than the critical F-value of 2.01 at 1 and 45 degrees of freedom and at .05 level of significance. With this result, the null hypothesis was rejected. Hence, there is significant difference in the performance of pupils in Word Analogy taught with the help of Word-Matching Game and those taught with expository method.

Hypothesis 3

There is no significant difference in the performance of pupils taught Structural Analysis with the help of Word-Matching Game and those taught with expository method.

Table 6: Analysis of Covariance of the difference in the Performance of Pupils Taught Structural Analysis Using Word-Matching Game and Expository Method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	53.63 ^a	2	26.82	13.68	.00
Intercept	55.54	1	55.54	28.32	.00
Pretest	43.42	1	43.42	22.14	.00
Teaching Method	34.08	1	34.08	17.38	.00
Error	86.28	34	1.96		
Total	908.00	37			
Corrected Total	139.92	36			

a. R Squared = .383 (Adjusted R Squared = .355) ; F-Crit = 2.01

The result in Table 6 reveals that the calculated F-value of 17.38 is greater than the critical F-value of 2.01 at 1 and 45 degrees of freedom and at .05 level of significance. With this result, the null hypothesis was rejected. Hence, there is significant difference in the performance of pupils in structural analysis taught with the help of Word-Matching Game and those taught with expository method.

5. DISCUSSION OF FINDINGS

Games and Context Clues among Pupils with Reading Difficulties

The result for testing null hypothesis 1 indicated that there is significant difference in the performance of pupils taught Context Clues with the help of Matching-Word Game and those taught with expository method. As shown in Table 4, the mean performance of pupils taught Context Clues using Word-Matching game was higher than that of pupils taught using expository method. Thus, the result of this study indicated the effectiveness of vocabulary games strategy in enhancing pupils' context clues skills. The pupils are as enthusiastic as they play the game, so identification of words become easier as they learn in an atmosphere of fun. As they identify and read a word, they make sentences with the word and sometimes use the word to complete a sentence. The result agrees with the finding of Allen, 1998 who opines that using games to teach context clues recognition may be more beneficial to students because once a child can decode easily, more attention can be paid to building meaning (Allen, 1998). It also collaborates with the view of Boumova (2008) who indicated that the use of games provides a safe place for students to practice and review word meanings, pronunciation, spelling, various forms of words, position in sentences, connotations and collocations.

Games and Word Analogy Clues among Pupils with Reading Difficulties

The result of testing null hypothesis 2 indicated that there is significant difference in the performance of pupils taught Word Analogy with the help of Matching-Word Game and those taught with expository method. The result in Table 5 indicated that the mean performance of pupils taught word analogy clues using word-matching game is higher than that of pupils taught using expository method. This was a submission that game-based instructional teaching is a better method in pupil's word analogy when compared to the expository method. The findings of this study agrees with Paramita (2017), who opines that using games such as Matching Words Game improves students' understanding of word analogy which can be effective in increasing students' understanding in vocabulary development.

Games and Structural Analysis Clues among Pupils with Reading Difficulties

The result of testing null hypothesis 3 indicated that there is significant difference in the performance of pupils taught Structural Analysis with the help of Word-Matching Game and those taught with expository method. The result in Table 6 indicated that the mean performance of pupils taught using word-matching game is greater than that of pupils taught using expository method. This findings agrees with earlier studies of Chung (2012), who indicated that games help students understand the meanings of affixes and roots where they break down words in parts for easy reading in order to understand common word roots. After developing meaning of the roots and affixes, students use the meaning to create sentences with the words to form word games.

6. CONCLUSION

Based on the findings of the study, it was concluded that utilizing Word-Matching Game in teaching and learning will enhance the vocabulary development skills of pupils with reading difficulties in Calabar Municipality, Cross River State, Nigeria thereby enhancing their academic performance.

7. RECOMMENDATION

Based on the conclusion of the study, the following recommendations were made:

Since game-based pedagogy has been seen to have a positive effect on the vocabulary development skills of pupils with reading difficulties, it is therefore recommended that teachers should embrace the 21st century skills by integrating game-based strategies into reading instruction to improve learning outcomes.

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