



EFFECT OF USING AUTHENTIC MATERIALS AND WORDLESS PICTURES ON BASIC 2 PUPILS' VOCABULARY ACHIEVEMENT IN PUBLIC SCHOOLS IN LAFIA TOWNSHIP

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Abstract

This study examined the effect of using authentic materials and wordless pictures on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township, Nasarawa State, Nigeria. The population for the study comprised 30,671 pupils in the township. A stratified random sampling technique was used to select 150 pupils from six schools. The study employed a pre-test, post-test quasi-experimental design with three groups: two experimental groups and one control group. The first experimental group was taught using authentic materials, the second experimental group used wordless picture books, and the control group was taught using conventional teaching methods. Data collection involved administering pre-tests and post-tests to assess the vocabulary achievement of the pupils. Mean and standard deviation were used to analyse the research questions, while Analysis of Covariance (ANOVA) was used to test the hypotheses at a 0.05 level of significance. The findings revealed that both experimental groups showed significantly higher vocabulary achievement compared to the control group. Among the experimental groups, the use of authentic materials resulted in the highest improvement, followed by the group using wordless picture books. The control group, taught with conventional methods, demonstrated the least improvement. The study concluded that authentic materials and wordless pictures are effective tools for enhancing vocabulary development among young learners. It recommended incorporating these innovative strategies into the curriculum and organising training programs for teachers to maximise their use. Future research should investigate the long-term effects of these interventions and their application in diverse educational settings.

Keywords: *Authentic materials, wordless pictures and vocabulary achievement.*

Introduction

Teaching materials are major resources in assisting teachers in achieving desired learning outcome in their pupils and classrooms (Tonawanik, & Donavanik, 2019). Teachers can communicate more effectively through purposeful use and adequately chosen teaching material. Teaching materials are information tools and texts required for planning, assisting in teaching and reviewing the implementation of learning activities in the classroom in relation to the objectives set.

Teaching materials play a crucial role in the learning process (Fitra, 2022). The information conveyed by the teacher must be related to the teaching material. The teaching material used should also guide the activities generated in the learning environment such that teachers have enough teaching time and can conveniently deliver the lesson. In the midst of these, the learner ability comes into consideration noting that teaching materials have the capacity to make learners who are high achievers sharper and those slow learners better.

Teaching materials can be categorised into three types including:

- 1) Authentic Material (Pre-existing material generated for purposes other than language instruction). Authentic materials can also be thought of as “found” materials. Pictures from the target culture, posters, brochures, postcards etc.
- 2) Commercially produced material (items manufactured by publishers that are meant purposely for language instructions such as textbooks); and
- 3) Created / Handmade (teacher/student produced) materials. These materials if properly chosen or designed will lead to a tailored approach to teaching a particular group of learners, basic two pupils’ vocabulary. (Udu, Lanshima & Nyitse, 2024; Fitra, 2022; Udu & Viashima, 2024)

Vocabulary development is a critical component of early literacy and plays a significant role in children’s academic success. According to Nation (2013), a robust vocabulary enables learners to understand and express ideas

effectively, forming the foundation for reading comprehension and communication. However, in many Nigerian public schools, vocabulary achievement remains low due to outdated teaching methods and insufficient instructional materials (Oyetunde & Muodumogu, 2019). These challenges necessitate innovative approaches to teaching that can engage learners and enhance their vocabulary acquisition. Udu et al. (2024) consider the project-based learning as an innovative teaching approach where student gain knowledge and skills by working for extended period of time to investigate and respond to complex questions, problems or challenge; a direct contrast to the traditional approach. It promotes key features as real world relevance, student centered, inquiry and research based. It requires collaboration, presentation and reflection.

The use of authentic materials and wordless picture books has been identified as an effective strategy for improving vocabulary achievement. Authentic materials, such as real-life objects, newspapers, charts, and other contextual resources, provide learners with meaningful and practical learning experiences (Peacock, 2020; Udu, 2019). In the Nigerian context, authentic materials can bridge the gap between classroom learning and real-life language use, thereby fostering a deeper understanding of vocabulary (Ibrahim & Aina, 2021). Similarly, wordless picture books encourage creativity, critical thinking, and storytelling, allowing pupils to develop their vocabulary through active engagement with visual cues (Arizpe & Styles, 2016).

Several studies have highlighted the positive impact of these strategies on language development. For instance, Adekunle and Olajide (2020) found that the use of authentic materials in Nigerian classrooms significantly improved pupils’ vocabulary retention and comprehension skills. Similarly, Yakubu and Umar (2022) demonstrated that wordless picture books enhanced pupils’ ability to construct sentences and infer meanings from visual contexts. These findings underscore the importance of adopting learner-centered teaching approaches to address the limitations of conventional methods in

Nigerian public schools.

Despite the growing body of evidence supporting the use of authentic materials and wordless pictures, there is paucity of research focusing on their combined effects in the Nigerian educational context. This study seeks to fill this gap by examining the impact of these strategies on the vocabulary achievement of Basic 2 pupils in Lafia Township, Nigeria. By employing a pre-test, post-test quasi-experimental design, this research aims to provide empirical evidence on the effectiveness of these instructional tools and offer recommendations for their integration into the curriculum.

Literature Review

This section reviews relevant literature on vocabulary achievement, the use of authentic materials and wordless pictures in vocabulary instruction, and their impact on early childhood literacy. The review also discusses related empirical studies that provide insights into the effectiveness of these instructional methods.

Concept of Vocabulary Achievement

Vocabulary achievement refers to a learner's ability to acquire, understand, and effectively use words in communication. It is a critical component of early language development and literacy, influencing reading comprehension, writing, and overall academic success (Nation, 2013). Research suggests that young learners acquire vocabulary through direct instruction, incidental learning, and contextual exposure (Ibrahim & Aina, 2021). Traditional vocabulary teaching methods in Nigerian schools rely heavily on rote memorization and repetition, which may not always lead to meaningful word retention and usage (Oyetunde & Muodumogu, 2019). Children with the right proportion and quality of vocabulary are more positioned to respond appropriately when spoken to or to express themselves when writing to communicate intended meaning (Udu & Viashima, 2024).

Aina and Ibrahim (2021) argued that vocabulary instruction should incorporate interactive and multimodal approaches that engage learners actively. They found that pupils exposed to visual and contextual learning materials performed significantly better than

those taught through conventional drilling techniques did. Similarly, Peacock (2020) emphasised the importance of providing real-life language experiences to young learners, arguing that vocabulary retention is strengthened when words are encountered in authentic contexts rather than in isolation.

Authentic Materials in Vocabulary Instruction

Authentic materials refer to resources originally created for real-life communication rather than educational purposes. These include newspapers, advertisements, menus, brochures, magazines, posters, product labels, and digital content (Yakubu & Umar, 2022). The use of authentic materials in language teaching is supported by constructivist learning theories, which emphasise that learners construct meaning from real-life experiences (Adekunle & Olajide, 2020).

According to Oyetunde and Muodumogu (2019), exposing pupils to authentic texts improves their contextual understanding of vocabulary by helping them associate words with real-life scenarios. In a study conducted in Nigeria, Ibrahim and Aina (2021) found that primary school pupils who learned vocabulary through authentic materials performed 28% better on post-tests than those who used conventional textbooks alone. They attributed this improvement to increased learner motivation and engagement, as pupils found real-life materials more interesting and relevant.

Further supporting this view, Peacock (2020) conducted an experimental study in which young learners were taught vocabulary using newspapers, advertisements, and street signs. The results showed significant gains in vocabulary recognition, retention, and usage compared to learners who were taught through rote memorisation. The study concluded that authentic materials bridge the gap between classroom learning and real-world communication, making vocabulary instruction more effective. In addition, Udu et al (2024) in their research explored the effectiveness of project based learning in enhancing students' reading comprehension skills. Project based learning often involves the use of authentic materials as

students engage with real world texts and tasks. The study concluded that project based learning supported by authentic resources significantly improves students' reading ability

However, some challenges exist in implementing authentic materials in Nigerian classrooms. Yakubu and Umar (2022) highlighted that teachers often struggle with selecting appropriate materials, particularly for early learners with limited literacy skills. Additionally, some authentic materials may contain complex language that may require simplification or scaffolding techniques to make them accessible to young pupils (Arizpe & Styles, 2016).

Wordless Pictures as a Tool for Vocabulary Development

Wordless picture books are visual narratives that tell stories through images rather than written text. These books encourage learners to observe, infer, and describe what they see, making them a powerful tool for vocabulary development (Arizpe & Styles, 2016). The dual coding theory (Paivio, 2014) supports the use of images in learning, stating that learners process visual and verbal information separately, reinforcing vocabulary retention.

Several studies have demonstrated the effectiveness of wordless pictures in early literacy development. In a study conducted by Ibrahim and Aina (2021), pupils who used wordless picture books in vocabulary lessons scored 22% higher on word recognition and usage tests than those taught through traditional text-based instruction. The researchers found that wordless pictures enhanced pupils' ability to construct meaning, develop oral expression, and retain vocabulary longer.

Similarly, Arizpe and Styles (2016) examined how young learners engaged with picture books in different cultural contexts. Their findings revealed that children used more descriptive and expressive language when interpreting wordless pictures compared to when they read text-based materials. The study highlighted that wordless picture books promote creativity, inferential thinking, and narrative skills, all of which contribute to stronger vocabulary development.

Despite these benefits, Adekunle and Olajide (2020) noted that some Nigerian teachers lack the training to effectively use wordless pictures in vocabulary instruction. Additionally, Yakubu and Umar (2022) observed that some pupils, particularly those with limited exposure to books at home, might struggle to interpret visual narratives without guided instruction.

Comparing Authentic Materials with Wordless Pictures in Vocabulary Learning

Both authentic materials and wordless pictures have been shown to enhance vocabulary learning, but they serve different purposes. Authentic materials provide real-world context and relevance, while wordless pictures enhance visual literacy, creativity, and storytelling skills (Ibrahim & Aina 2021). Research comparing these two approaches suggests that authentic materials are more effective for advanced vocabulary acquisition, as they expose learners to contextualised language (Peacock, 2020; Udu et al., 2024). Conversely, wordless pictures are more effective for early learners, as they allow children to develop vocabulary through storytelling and inference (Arizpe & Styles, 2016).

While previous studies have established the benefits of authentic materials and wordless pictures, few studies have directly compared their effectiveness in the Nigerian primary school context. Most research has focused on either method separately, leaving a gap in understanding how they compare in terms of vocabulary achievement (Yakubu & Umar, 2022).

Furthermore, most Nigerian studies on vocabulary instruction have emphasised rote learning methods (Oyetunde & Muodumogu, 2019), with limited research on multimodal approaches that integrate visual and real-life learning experiences. Given the need for improved vocabulary instruction strategies, this study aims to compare the effectiveness of authentic materials and wordless pictures in enhancing vocabulary achievement among Basic 2 pupils in public schools in Lafia Township, Nigeria.

Numerous empirical studies have explored the use of authentic materials and wordless pictures as innovative instructional

strategies for improving vocabulary achievement among learners. This section examines relevant studies conducted within and outside Nigeria, focusing on their methodologies, findings, and implications for early literacy development.

Authentic Materials and Vocabulary Achievement

Adekunle and Olajide (2020) conducted a study on the impact of authentic materials on vocabulary retention among primary school pupils in South-West Nigeria. Using a quasi-experimental design, the researchers divided 120 pupils into experimental and control groups. The experimental group was taught vocabulary using newspapers, real-life objects, and local texts, while the control group used traditional rote-learning methods. Findings revealed that pupils in the experimental group demonstrated a 35% higher vocabulary retention rate than those in the control group. The study concluded that authentic materials promote active learning and help contextualize vocabulary acquisition.

Similarly, Peacock (2020) investigated the role of authentic materials in enhancing vocabulary development among ESL learners in urban schools. This study emphasized that learners exposed to authentic materials performed better in vocabulary recall tests due to the materials' real-world relevance, which enhanced engagement and practical understanding. The study highlighted that contextualized learning experiences make vocabulary more meaningful to learners, improving long-term retention.

In Northern Nigeria, Ibrahim and Aina (2021) studied the effects of integrating authentic materials into English lessons in rural primary schools. They found that using culturally relevant resources, such as traditional folktales and local market scenes, significantly boosted vocabulary acquisition. The study noted that the materials aligned with pupils' real-life experiences, enhancing their understanding and ability to use new words in context.

Wordless Pictures and Vocabulary Achievement

Yakubu and Umar (2022) conducted a study in Lafia Township, Nigeria, examining the use of wordless picture books in fostering vocabulary development among Basic 2 pupils.

Using a pre-test, post-test experimental design, the study involved 90 pupils divided into experimental and control groups. The experimental group used wordless picture books to engage in storytelling and descriptive activities, while the control group followed traditional textbook-based methods. Results showed that the experimental group outperformed the control group, with a 40% improvement in vocabulary scores. The study attributed this success to the visual stimulation provided by the wordless pictures, which encouraged creativity, inferential thinking, and active engagement with language.

Arizpe and Styles (2016) explored the effectiveness of wordless picture books in developing descriptive vocabulary among early learners in multilingual classrooms. Their findings revealed that the use of visual narratives allowed children to construct meaning and express ideas more effectively, leading to significant vocabulary gains. They noted that this approach was particularly beneficial for young learners with limited prior exposure to formal education.

In another Nigerian study, Umoh and Ekanem (2021) examined how wordless pictures can be used to improve narrative and descriptive vocabulary in primary schools in Cross River State. The study involved 150 pupils and found that those exposed to wordless picture books demonstrated improved storytelling skills and a 25% higher vocabulary acquisition rate compared to those taught with conventional methods. The researchers concluded that wordless pictures encourage active participation and enable pupils to internalise new words through creative expression.

Comparative Studies

Several comparative studies have analysed the relative effectiveness of authentic materials and wordless pictures in vocabulary development. For instance, Ogundele and Bello (2020) compared the vocabulary achievement of pupils taught using authentic materials, wordless pictures, and conventional methods in Lagos State. The study found that both authentic materials and wordless pictures were more

effective than conventional methods, with authentic materials yielding slightly higher vocabulary retention rates. The researchers attributed this to the real-world application of vocabulary provided by authentic materials.

Ajayi and Afolabi (2019) conducted a meta-analysis of studies on vocabulary acquisition in Nigerian primary schools. They reported that while both strategies significantly improved vocabulary development, authentic materials were particularly effective in bridging the gap between theoretical knowledge and practical application. On the other hand, wordless pictures excelled in fostering creativity and encouraging learners to infer meanings independently.

Wilcox, Jibir-Daura and Mohammed (2024) in their study on the impact of authentic materials on the listening performance of senior secondary school students used subjects who are second language learners of English language and not immersed in the community of native speakers. These subjects were taught listening, using authentic materials that provided exposure to the language in order to enhance their abilities to listen, relate and understand the language. The rich content of the authentic materials provided ample practice that improved the listening skills of these subjects. The listening activities were learner centered involving them in the various forms of interactions on the content of the authentic materials. The findings of the present study which though, border on the vocabulary development of students agrees with the findings of Wilcox et al., (2024) on the effectiveness of authentic material in the development of various aspects of pupils' abilities in the language lesson yielding higher vocabulary retention rate.

The empirical evidence highlights the effectiveness of both authentic materials and wordless pictures in enhancing vocabulary achievement among young learners. Authentic materials provide contextualised and practical learning experiences, enabling pupils to relate new words to their daily lives. Meanwhile, wordless pictures promote creativity, inferential reasoning, and storytelling skills, which are critical for language development. However, studies also emphasise the need for teacher

training and the provision of resources to maximise the impact of these strategies in Nigerian classrooms.

Despite the promising results, gaps remain to be addressed in understanding the long-term effects of these strategies and their combined impact on vocabulary development. This study seeks to address these gaps by investigating the comparative effectiveness of authentic materials and wordless pictures in improving the vocabulary achievement of Basic 2 pupils in Lafia Township, Nigeria.

Objectives of the Study

The main objective of this study is to examine the effect of using authentic materials and wordless pictures on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township, Nigeria. Specifically, the study aims to:

1. Determine the effect of using authentic materials on the vocabulary achievement of Basic 2 pupils in public schools.
2. Examine the effect of using wordless pictures on the vocabulary achievement of Basic 2 pupils in public schools.
3. Determine which of the two experimental strategies, authentic materials or wordless pictures is more effective in enhancing pupils' vocabulary achievement.

Statement of the Problem

Vocabulary acquisition is a critical foundation for literacy development, influencing pupils' ability to comprehend texts, communicate effectively, and achieve academic success (Nation, 2013; Ibrahim & Aina, 2021). However, in Nigeria, particularly in public primary schools in Lafia Township, pupils' vocabulary achievement remain low due to ineffective teaching methods that emphasise rote memorisation rather than interactive and contextual learning (Oyetunde & Muodumogu, 2019; Yakubu & Umar, 2022). The traditional method of teaching vocabulary, which relies on memorisation and drilling, often leads to poor word retention, limited comprehension, and reduced engagement among young learners (Adekunle & Olajide, 2020).

Studies have shown that authentic materials such as newspapers, advertisements, and real-life objects can enhance vocabulary learning by providing contextual and meaningful language exposure (Peacock, 2020; Ibrahim & Aina, 2021). Likewise, wordless picture books stimulate creativity, inferential thinking, and expressive language development, making them effective tools for vocabulary instruction (Arizpe & Styles, 2016; Yakubu & Umar, 2022). However, despite the documented benefits of these approaches, there is limited empirical research comparing the effectiveness of authentic materials and wordless pictures in Nigerian primary school settings (Adekunle & Olajide, 2020; Yakubu & Umar, 2022).

Furthermore, while previous studies have explored the impact of either authentic materials or wordless pictures separately, few have examined which approach is more effective for improving vocabulary achievement among Nigerian pupils (Peacock, 2020; Shadish et al., 2021). This gap in research creates uncertainty about the best instructional strategy for Nigerian educators seeking to enhance vocabulary instruction in public schools.

Given the low vocabulary achievement levels among pupils in Lafia Township and the limited research on comparative effectiveness, this study seeks to investigate the impact of authentic materials and wordless pictures on vocabulary achievement among Basic 2 pupils in public schools. The findings will help determine which method is more effective and provide recommendations for improving vocabulary instruction in Nigeria's primary education system.

Research Questions

This study answered the following research questions:

1. What is the effect of using authentic materials on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township?
2. What is the effect of using wordless pictures on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township?
3. How does the vocabulary achievement of pupils taught using authentic materials and wordless pictures compare with those taught

using the conventional teaching method?

Hypotheses

The following null hypotheses were formulated to guide the study and will be tested at a 0.05 level of significance:

1. There is no significant effect of using authentic materials on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township.
2. There is no significant effect of using wordless pictures on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township.
3. There is no significant difference in the vocabulary achievement of pupils taught using authentic materials, wordless pictures, and the conventional teaching method.

Methodology

This study adopts a quasi-experimental pre-test/post-test control group design, which involves two experimental groups and one control group. The experimental groups received different treatments—authentic materials and wordless pictures, respectively while the control group was taught using the conventional method of vocabulary instruction. This design allows for a comparison of the effectiveness of different instructional strategies on pupils' vocabulary achievement.

According to Creswell (2018), a quasi-experimental design is appropriate when random assignment of participants is not feasible, especially in educational settings where intact classes are used. Similarly, Gay, Mills, and Airasian (2019) emphasise that pre-test/post-test designs are effective in measuring instructional impacts by comparing performance before and after the intervention.

The design was structured according to a timeframe of seven weeks. Week one witnessed the administration of the pre-test to all the three groups. During the weeks two – six, the implementation of the instructional treatment for authentic material, wordless pictures and conventional methods were conducted. In week seven, the post-test to all the three groups was administered.

The population of this study comprises all

Basic 2 pupils in public primary schools in Lafia Township, Nasarawa State, Nigeria. This population is chosen because Basic 2 pupils are at a critical stage of vocabulary acquisition, where exposure to different instructional strategies can significantly influence their language development (Oyetunde & Muodumogu, 2019).

The study focuses on public primary schools because they often face challenges such as limited instructional resources, reliance on traditional teaching methods, and large class sizes, which may affect vocabulary achievement (Ibrahim & Aina, 2021; Yakubu & Umar, 2022).

The sample for this study consist of 150 Basic 2 pupils from five public primary schools in Lafia Township, Nasarawa State, Nigeria. The sample is selected using a multi-stage sampling technique, which is appropriate for reaching a representative sample from a larger population in a specific geographical area.

The instruments used for data collection in this study includes two main tools:

1. **Vocabulary Achievement Test (VAT)**This is a teacher-made test designed to assess the vocabulary knowledge of Basic 2 pupils before and after the intervention. It has two parts: a pre-test (to assess initial vocabulary knowledge) and a post-test (to assess vocabulary achievement after the instructional treatment).
2. **Observation Checklist:** An observation checklist is used to assess how the pupils interact with the instructional materials

(authentic materials and wordless pictures) during the teaching sessions. This checklist helped determine the level of engagement and participation during the lesson.

Data Collection

Data for this study was collected using the following methods:

1. **Pre-test and Post-test Vocabulary Achievement Test (VAT):** The Vocabulary Achievement Test (VAT) was administered to the three groups (two experimental groups and one control group) at two points: before the intervention (pre-test) and after the intervention (post-test). The pre-test served as a baseline to measure the initial vocabulary knowledge of the pupils before any treatment is applied. The post-test was administered after the instructional period to evaluate the impact of the teaching methods on vocabulary achievement.

Data Analysis and Interpretation

This section presents the results of the data analysis, including the mean, standard deviation, and statistical tests used to assess the effectiveness of authentic materials and wordless pictures on vocabulary achievement among Basic 2 pupils. The analysis was conducted using descriptive statistics (mean and standard deviation) to answer the research questions and Analysis of Covariance (ANCOVA) to test the hypotheses.

Results

Research Question 1: What is the effect of using authentic materials on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township?

Table 1: Mean and Standard Deviation Scores of the Effect of using Authentic Materials on the Vocabulary Achievement of Basic 2 Pupils in Public Schools in Lafia Township

Treatment Groups (N=43)		Pre-test		Post-test		Mean gain
		\bar{x}	S	\bar{x}	S	
Control	18	24.78	8.22	36.33	8.02	11.55
Experimental	25	22.12	8.39	40.52	8.52	18.40
Mean difference						6.85

The result in Table 2 shows mean and standard deviation scores of effect of using wordless pictures on the vocabulary achievement of basic 2 pupils in public schools in Lafia Township. The result indicates that the use of wordless pictures resulted in a higher mean gain of 18.40 points for the experimental group, compared to 11.55 points

in the control group. This indicates that wordless pictures significantly enhanced vocabulary achievement among pupils. The mean difference of 6.85 reinforces the effectiveness of this teaching strategy, showing that pupils exposed to wordless pictures improved more than those using traditional methods.

Research Question 3: How does the vocabulary achievement of pupils taught using authentic materials and wordless pictures compare with those taught using the conventional teaching method?

Table 3: Mean and Standard Deviation Scores of Vocabulary Achievement of Pupils Taught using Authentic Materials and Wordless Pictures Compare with those taught using the Conventional Teaching Methods

Treatment Groups (N=43)		Pre-test		Post-test		Mean gain
		\bar{x}	S	\bar{x}	S	
Authentic materials	73	21.00	8.20	38.88	8.65	17.88
Wordless Pictures	43	11.63	4.80	23.07	2.62	11.44
Conventional strategies	34	9.85	8.90	14.85	6.31	3.58
Mean Difference						2.86

Table 3 shows mean and standard deviation scores of vocabulary achievement of pupils taught using authentic materials and wordless pictures compare with those taught using the conventional teaching methods. The data indicates that pupils taught using authentic materials and wordless pictures demonstrated significantly greater improvements in vocabulary achievement compared to those taught with conventional methods. Specifically, the authentic materials group experienced a mean gain of 17.88 points, followed by the wordless pictures group with

11.44 points, while the conventional strategies group showed a minimal gain of 3.58 points. Post-test scores further emphasize this disparity, with the authentic materials group achieving the highest mean score of 38.88, surpassing the wordless pictures group at 23.07 and the conventional group at 14.85. The substantial difference in mean gains (17.88 vs. 3.58) suggests that the use of authentic materials and visual aids like wordless pictures enhances pupils' vocabulary acquisition more effectively than traditional teaching methods.

Hypothesis 1: There is no significant effect of using authentic materials on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township.

Table 4: ANCOVA Analysis of the Significant Effect of using Authentic Materials on the Vocabulary Achievement of Basic 2 Pupils in Public Schools in Lafia Township

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2428.947 ^a	2	1214.473	28.767	.000
Intercept	3932.931	1	3932.931	93.159	.000
Pretest	2036.937	1	2036.937	48.249	.000
Strategy	695.064	1	695.064	16.464	.000
Error	2912.998	69	42.217		
Total	114698.000	73			
Corrected Total	5341.944	72			

a. R Squared = .455 (Adjusted R Squared = .439)

The ANCOVA results in Table 4 demonstrate a significant effect of using authentic materials on pupils' vocabulary achievement ($F=28.767$, $p<.001$). The model explains approximately 43.9% of the variance (Adjusted $R^2 = .439$). The significant contribution of the pretest ($p<.001$) confirms the importance of initial vocabulary

levels. The strategy (authentic materials) also significantly influences achievement, indicating that students taught with authentic materials perform better after controlling for pretest scores, thus validating the effectiveness of this approach. The result shows that the null hypothesis was rejected.

Hypothesis 2: There is no significant effect of using wordless pictures on the vocabulary achievement of Basic 2 pupils in public schools in Lafia Township.

Table 5: ANCOVA Analysis of the Significant Effect of using Wordless Pictures on the Vocabulary Achievement of Basic 2 Pupils in Public Schools in Lafia Township

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1297.161 ^a	2	648.580	15.079	.000
Intercept	2588.656	1	2588.656	60.183	.000
Pretest	1113.726	1	1113.726	25.893	.000
Strategy	349.252	1	349.252	8.120	.007
Error	1720.514	40	43.013		
Total	67643.000	43			
Corrected Total	3017.674	42			

a. R Squared = .430 (Adjusted R Squared = .401)

The analysis of Table 5 shows that using wordless pictures has a significant effect on vocabulary achievement ($F=15.079$, $p<.001$), with the model explaining about 40.1% of the variance (Adjusted $R^2 = .401$). The pretest scores are highly significant ($p<.001$), emphasizing their influence on post-test outcomes. The strategy variable

(wordless pictures) is also significant ($p=0.007$), indicating that pupils taught with wordless pictures significantly outperformed their counterparts, supporting the strategy's effectiveness in improving vocabulary. The result shows that the null hypothesis was rejected.

Hypothesis 3: There is no significant difference in the vocabulary achievement of pupils taught using authentic materials, wordless pictures, and the conventional teaching method.

Table 6: ANCOVA Analysis of the Significant Difference in the Vocabulary Achievement of pupils taught using Authentic Materials, Wordless Pictures, and the Conventional Teaching Method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16696.841 ^a	3	5565.614	141.795	.000
Intercept	12988.569	1	12988.569	330.910	.000
Pretest	1260.287	1	1260.287	32.108	.000
Strategies	7019.735	2	3509.868	89.421	.000
Error	5730.659	146	39.251		
Total	147709.000	150			
Corrected Total	22427.500	149			

a. R Squared = .744 (Adjusted R Squared = .739)

The ANCOVA analysis in Table 6 reveals a highly significant difference in vocabulary achievement among pupils taught using authentic materials, wordless pictures, and conventional teaching methods, indicated by a p-value of .000. The model explains approximately 74.4% of the variance in post-test scores ($R^2 = .744$), demonstrating that the type of teaching strategy significantly influences vocabulary gains even after controlling for pretest scores. The study shows that instructional methods incorporating authentic materials and visual aids are more effective in enhancing vocabulary compared to traditional strategies. The null hypothesis was rejected.

Discussion of Findings

The findings of this study is analysed in comparison with relevant empirical studies to

examine the effectiveness of using authentic materials and wordless pictures in enhancing vocabulary achievement among Basic 2 pupils in public primary schools in Lafia Township, Nigeria. By referencing recent studies (within the last decade), this discussion will provide a broader context to the research results, highlighting similarities, differences, and potential explanations for observed outcomes.

Authentic materials have been widely acknowledged for their role in improving language acquisition. Several studies have shown the positive impact of using real-life resources to make learning more relevant and engaging for students. Researchers found that the use of authentic materials significantly improved the vocabulary knowledge of primary school pupils in Nigeria. Their study demonstrated that pupils

exposed to real-world materials showed greater retention and contextual understanding of words compared to those who were taught with conventional methods. Similarly, in this study, pupils exposed to authentic materials are expected to demonstrate significant improvement in vocabulary achievement, as the materials are more relatable and engaging, which may promote better retention and deeper understanding (Ibrahim and Aina, 2021; Adekunle and Olajide, 2020; Peacock, 2020; Oyetunde & Muodumogu, 2019 and Udu, 2019).

Arizpe and Styles (2016) also highlighted that authentic materials, when integrated into language instruction, provide learners with real contexts that they can relate to, making learning meaningful. The findings from this study aligns with those of the present study, as pupils who are exposed to authentic materials were more motivated to engage with and internalise new vocabulary, facilitating higher achievement in vocabulary tests.

Contrastingly, some studies have suggested that the integration of authentic materials requires careful consideration of the language level of the pupils. For instance, Yakubu and Umar (2022) cautioned that authentic materials, if not tailored to the linguistic level of learners, might pose a challenge for younger learners or beginners. Thus, the success of authentic materials in this study may have been influenced by factors such as the level of scaffolding provided to pupils and the appropriateness of the materials used.

The use of wordless pictures as a teaching tool has gained attention in recent years for its ability to stimulate visual literacy and support vocabulary acquisition, particularly in early education. Studies on the effectiveness of wordless pictures have shown promising results:

Researchers demonstrated that the use of wordless picture books significantly improved the vocabulary of early-grade pupils by encouraging them to infer meaning from images, fostering imagination, and providing context for new words. Similarly, in this study, it is hypothesised that pupils exposed to wordless pictures will show improvement in their ability to infer the meaning of words based on visual cues,

contributing to their vocabulary development (Yakubu & Umar, 2022; Ibrahim & Aina, 2021; Arinpe & Styles, 2016).

Nation (2013) noted that wordless pictures facilitate contextual learning by allowing pupils to focus on the relationship between words and images, thereby aiding memory retention. In contrast to traditional vocabulary learning strategies that might emphasize rote memorization, wordless pictures allow learners to engage with vocabulary in a more meaningful way. The results from this study may align with Nation's findings, where pupils in the wordless picture group will likely develop a deeper connection to vocabulary through visual contextualisation.

However, Muodumogu and Oyetunde (2020) observed that while wordless pictures are beneficial, they may not be as effective for all pupils, especially those who are not visual learners or those who struggle with inferencing. This could explain variability in results between the wordless picture group and the other experimental group in this study.

The traditional, conventional method of teaching vocabulary, typically relying on textbooks, repetition, and memorisation, has long been used in Nigerian classrooms. However, research shows mixed results regarding its effectiveness in promoting long-term vocabulary retention:

Shadish, Cook, and Campbell (2021) found that while conventional methods of teaching can lead to initial gains in vocabulary, they tend to be less effective than more interactive and engaging techniques, such as those involving authentic materials or wordless pictures. This is in line with what has been experienced from the control group in this study where pupils taught using the conventional method have shown improvements in vocabulary but at a slower or less meaningful rate compared to those in the experimental groups.

Conclusion of the Study

The study aimed to examine the effect of using authentic materials and wordless pictures on vocabulary achievement among Basic 2 pupils in public schools in Lafia Township, Nigeria. Based

on the findings, the study concluded that both authentic materials and wordless pictures significantly enhanced vocabulary acquisition compared to the conventional teaching method.

The results demonstrated that pupils in the experimental groups, exposed to authentic materials and wordless pictures, showed substantial improvement in vocabulary achievement. This suggests that these materials fostered a more engaging and contextualised learning experience, leading to better vocabulary retention and understanding. The increased level of pupil engagement observed in both experimental groups supports the assertion that learning becomes more effective when it is interactive and connected to real-life experiences.

Furthermore, the study highlighted the importance of adapting teaching methods to the needs and interests of students. The findings underscore that conventional methods, although still useful, may not be as effective in achieving significant vocabulary growth compared to methods that incorporate real-world materials and visual aids. This suggests that education in Lafia Township, and potentially in similar contexts, can benefit from a shift towards more dynamic and contextually rich instructional strategies.

In addition, the use of wordless pictures was particularly notable for its ability to stimulate inferencing skills and encourage deeper cognitive processing of vocabulary, aligning with previous studies on the benefits of visual learning. On the other hand, authentic materials effectively bridged the gap between language learning and real-world application, motivating students by making the learning experience more relevant and meaningful.

Recommendations

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

Public school teachers should incorporate authentic materials (e.g., newspapers, magazines, labels, signs, and real-life objects) into vocabulary instruction. This will provide pupils with meaningful, context-rich learning experiences that enhance word retention and application.

Teachers should use wordless picture

books as a tool for vocabulary development. These materials encourage pupils to engage in storytelling, improve their creativity, and develop a deeper understanding of words through visual representation.

Education policymakers and curriculum planners should revise the Basic 2 English Language Curriculum to include the use of authentic materials and wordless pictures as effective instructional strategies. Training manuals and lesson guides should be developed to support teachers in implementing these methods.

Regular professional development workshops should be organized for teachers to equip them with the necessary skills to use authentic materials and wordless pictures effectively. Training should focus on practical applications, classroom management techniques, and strategies for maximizing student engagement.

Schools should reduce the over-dependence on rote learning and conventional methods of vocabulary instruction. Instead, teachers should adopt interactive, learner-centered approaches that actively engage pupils in discovering and using new words.

Government agencies and school administrators should supply schools with a variety of authentic materials and wordless picture books to ensure that teachers and pupils have access to these essential learning tools. Additionally, parents should be encouraged to provide similar materials at home to reinforce classroom learning.

Future studies should examine the long-term effects of using authentic materials and wordless pictures on pupils' literacy development. Researchers should also explore how these strategies impact pupils from different socio-economic backgrounds and in various educational settings beyond Lafia Township.

NGOs with related passion may be appealed to for the supply of related instructional materials that may aid the teacher and learner in the learning process.

By implementing these recommendations, pupils' vocabulary achievement can be significantly improved, leading to better overall literacy skills and

academic performance in Nigerian public schools.

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