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Influence of Gamified Instructional Strategies on Vocabulary Acquisition Among Primary School Pupils in Oyo East Local Government Area, Oyo State

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ABSTRACT

This study examined the impact of gamified instructional strategies on vocabulary acquisition among primary pupils in Oyo East Local Government Area, Nigeria. Using a quasi-experimental pretest-posttest control group design, 132 pupils from six intact classes were assigned to experimental (gamified instruction) and control (traditional instruction) groups. The Vocabulary Acquisition Test (VAT), validated by experts and demonstrating a reliability coefficient of 0.78, served as the primary assessment tool. Analysis of Covariance (ANCOVA) results revealed a statistically significant improvement in vocabulary acquisition for the gamified group ($F = 80.852$, $p < 0.05$), confirming the effectiveness of game-based learning approaches. However, no significant interaction effects were observed for gender or school type ($p > 0.05$), indicating the generalisability of these techniques across diverse student demographics. The results highlighted the educational benefits of integrating gamification components, such as digital games, role-playing exercises, and reward systems, into vocabulary teaching, especially in settings with limited resources where low-tech options like board games can also be beneficial. These findings suggest that educators should methodically include gamified strategies into their pedagogical approaches, while policymakers ought to emphasised teacher training initiatives and infrastructure enhancement to enable the extensive adoption of these novel methodologies. This study adds to the growing amount of evidence that game-based learning can change the way primary school pupils learn languages.

Key words: *Gamified Instructional Strategies, Vocabulary Acquisition, Primary School Pupils, Education*

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INTRODUCTION

The learning of vocabulary is an elementary aspect of English language learning, particularly in the elementary school level, as it forms the foundation of literacy and communication (Nnadozie & Ugochukwu, 2021). Well-developed vocabulary enables students to comprehend texts, communicate appropriately, and engage effectively in intellectual and social discussion. In Nigeria, where English is used as a medium of instruction, acquiring early vocabulary is central to academic success in all disciplines. Studies show that students with poor vocabulary have difficulty comprehending reading and learning in general (Oketoyin, 2025). Interactive teaching methods are key to motivating young learners to acquire new words. Traditional rote memorization methods are ineffective in sustaining students' interest, leading to passive learning (Udu &Viashima, 2024). On the other hand, interactive methods such as storytelling, game, and multimedia resources make vocabulary learning enjoyable and meaningful. Nigerian research has found that students subjected to interesting and interactive methods show higher retention and application of new vocabulary (Adebileje & Akinola, 2020).

The shift towards interactive learning in Nigerian primary schools reflects global education tendencies putting utmost premium on learner participation. Digital materials, such as educational applications and cartoon videos, have the capability of speeding up vocabulary acquisition through the provision of visual and auditory signals (Oyekanmi, 2021). Moreover, cooperative approaches such as group discussion and role-playing encourage learners to use new words within a setting, which reinforces their learning. A study in Lagos found that learners who were instructed using interactive methods performed better than their peers in vocabulary tests (Oketoyin, 2025). Vocabulary learning fosters cognitive development through the widening of learners' conceptual knowledge and critical thinking abilities. Learners learn about the underlying concepts and cultural background of words as they acquire new words (Enighe & Afangideh, 2018). For instance, learning specialized vocabulary in social studies or science enhances the ability of learners to understand and describe complex concepts. Nigerian researchers underscore that exposure to extensive vocabulary allows learners to undertake high-level thinking tasks, such as problem-solving and creative writing (Nnadozie& Ugochukwu, 2021). The role of the teachers in ensuring successful vocabulary learning cannot be emphasized enough. Professional development programmes should equip teachers with methods for implementing interactive and contextual vocabulary instruction (Oyekanmi, 2021).

Research in Nigeria suggests that teachers who incorporate realia, pictures, and dramatization into lessons build more engaging learning activities (Adeniran &Oyebola, 2021). Furthermore, establishing a print-rich classroom environment—

utilizing word walls, labeled materials, and reading spaces—encourages incidental vocabulary acquisition. Since learners are surrounded by written words, they will definitely take in and remember the words by exposure. Support from families also greatly contributes to vocabulary building. Parents reinforce school learning whenever they engage in shared reading, reading aloud, and everyday conversations with their children (Mark &Dzer, 2023).

Studies in Oyo State found that children whose parents were engaged actively in nurturing the development of their language had increased vocabulary development than children who did not have any parental engagement (Oladipupo & Onabamiro, 2025). The involvement of parents can be facilitated by schools through workshop sessions that demonstrate how parents can help children develop language at home. Parent-teacher collaboration assures a peaceful and consistent learning environment. Despite the recognized demand for vocabulary acquisition, challenges such as massive class sizes and scarce resources impede effective instruction in most Nigerian primary schools (Adeosun & Adeoye, 2022). Policymakers must overcome these obstacles by making investments in instructional resources, information and communication technology infrastructure, and teacher capacity building.

The Nigerian Educational Research and Development Council (NERDC) has encouraged curriculum reforms that emphasize communicative and interactive strategies to teach languages (NERDC, 2023). By aligning educational policies with contemporary pedagogical practices, stakeholders can optimize vocabulary training and language learning. Gamification of education refers to the integration of game-like elements such as leaderboards, points, quizzes, computer games, role-playing, and narrative into teaching approaches to optimize learner motivation and learning. Leaderboards induce positive competition based on ranking learners by performance, which could energize participation and work (Nwachukwu &Nwizu, 2024).

Points systems reward students for completing work, good conduct, and incremental progress (Komolafe, 2022). Quizzes and computer games make learning an adaptive process of interaction with immediate feedback and varying levels of challenge. Role-play and storytelling immerse learners in a context-driven experience that ensures retention and usability of knowledge (Ikpat, 2025). Gamification of language learning has been particularly useful for vocabulary retention and motivation. Global studies indicate that gamified platforms like Duolingo and Quizlet promote repetition and recall exercises (Attah, Ogunlade & Falade, 2024). In Nigeria, research indicates that learners at primary and secondary levels, being taught vocabulary through gamified classes, outperform the traditionally managed classes (Okafor & Ibrahim, 2021).

A study in Enugu State showed that computer word games enhanced active participation and memory retention of learners in the long run (Enighe & Afangideh, 2018). In addition, role-play activities in Yoruba-medium instruction schools helped learners locate new English terms in context, bridging the gap between first and second-language acquisition (Aliu et al., 2025). Although effective, gamification in Nigerian schools is faced with severe challenges. One significant challenge is limited teacher training on gamified pedagogy (Okeke & Onyema, 2021).

Teachers lack exposure to digital learning tools or game-based pedagogy, which handicaps its use in classrooms. Further, limited ICT infrastructure—poor electricity supply, low internet connection, and equipment deficiency—disallow the implementation of digital gamification (Yusuf & Adeleke, 2020). Limitations in curriculum also make it harder to implement gamification. Nigeria's rigid, examination-based curriculum inclines towards memorization and not interactive approaches (Yusuf & Adeleke, 2020). Policymakers and school leaders may resist gamification as a distraction rather than a serious pedagogy. Research in Lagos showed that while teachers recognized gamification's potential, they were forced to adhere to traditional ways in terms of what they needed to provide for standardized testing (Komolafe, 2022). Another issue is disparity in access to gamified learning across urban and rural schools. Urban schools with better infrastructure are more likely to try digital games and online quizzes, whereas rural schools lag behind due to poor infrastructure (Akinola & Adekunle, 2022).

This digital gap extends education disparities, providing fewer opportunities to underprivileged learners for interactive learning. Researchers suggest that low-tech gamification approaches, such as board games and role-playing by physical means, can be viable alternatives in resource-limited settings (Adebileje& Akinola, 2020). Teacher disposition also plays a significant role in the success of gamification. Some teachers view gamified learning as taking a lot of time or not addressing core educational goals (Sanmugam et al., 2022). Staff development workshops demonstrating the academic merit of gamification could change these feelings. For instance, workshops demonstrating how leaderboards and scoring systems increase students' engagement in language class raised teacher uptake in some Nigerian schools (Okafor & Ibrahim, 2021).

Financial constraints further limit gamification's reach. The majority of Nigerian schools lack the means to purchase learning games, tablets, or software licenses (Okafor & Ibrahim, 2021). Public-private partnerships and government-funded grants could fill this gap. A case in point is a pilot scheme in Anambra State, where an ed-tech firm provided a gamified learning app for free, and it experienced remarkable student engagement increases (Okeke & Onyema, 2021). Gamification teaching techniques, through the incorporation of game features like points, awards, challenges, and

engagement activities, have become revolutionary mechanisms for enhancing learning achievements. Empirical evidence showed that gamification has a tendency to stimulate learners' motivation, engagement, and retention (Maryati et al., 2022).

Despite its potential, application of gamified techniques in Oyo East Local Government Area primary schools is still low. The study seeks to analyze the effect of gamified learning strategies on learning vocabulary by primary school pupils, completing the gaps in knowledge and making improvements for better learning practices.

1. Statement of the Problem and Purpose of the Study

While several studies have explored the benefits of gamified instructional strategies in education, there is a dearth of literature on their specific role in enhancing vocabulary acquisition among primary pupils in Oyo East Local Government Area. This gap in knowledge necessitates further investigation to identify effective strategies for integrating gamified approaches into primary education and improving learning outcomes.

The main purpose of this study is to assess the influence of gamified instructional strategies on vocabulary acquisition among primary school pupils in Oyo East Local Government Area. Specifically, the study aims to:

i. Determine the significant main effect of gamified instructional strategies on vocabulary acquisition among primary pupils.
ii. Investigate the interaction effect of gamified strategies, gender, and school type on vocabulary acquisition among primary pupils.

METHOD OF STUDY

The following research hypotheses were formulated to guide the study:

i. There is no significant main effect of gamified instructional strategies on vocabulary acquisition among primary pupils.
ii. There is no significant interaction effect of gamified strategies, gender, and school type on vocabulary acquisition among primary pupils.

The study employed a quasi-experimental pretest-posttest control group design. The population comprised all primary school pupils in Oyo East Local Government Area, with a random sample of 132 pupils selected from six intact classes. The researchers developed a Vocabulary Acquisition Test (VAT) consisting of 20 multiple-choice items based on a table of specifications. The content validity of the instrument was established by two experts in primary education, and its reliability was tested using the test-retest method, yielding a reliability coefficient of 0.78. Data were analyzed

using Analysis of Covariance (ANCOVA) at a 0.05 level of significance. The independent variable was the instructional strategy (gamified vs. conventional), while the dependent variable was vocabulary acquisition. Gender and school type were included as moderating variables.

RESULTS AND DISCUSSION OF FINDINGS

H_{01}: There is no significant main effect of gamified instructional strategies on vocabulary acquisition among primary pupils.

Table 1: Summary of ANCOVA showing the main effect of gamified instructional strategies on vocabulary acquisition.

Sources	Type IIISum of Squares	df	Mean Square	F	Sig.	Remark
Corrected Model	655.882	2	327.941	74.318	0.000	
Intercept	240.785	1	240.785	54.567	0.000	
Pretest	27.245	1	27.245	6.174	0.015	
Group	356.774	1	356.774	80.852	0.000	Significant
Error	392.726	89	4.413			
Total	9466.000	92				
Corrected Total	1048.609	91				

Note: $R^2 = 0.625$ (Adjusted $R^2 = 0.617$)

The results indicate an F-value of 80.852, which is significant at the 0.05 alpha level. Therefore, the null hypothesis is rejected, suggesting a significant main effect of gamified instructional strategies on vocabulary acquisition.

H_{02}: There is no significant interaction effect of gamified strategies, gender, and school type on vocabulary acquisition among primary pupils.

Table 2: ANCOVA table showing the interaction effect of gamified strategies, gender, and school type on vocabulary acquisition.

Sources	Type IIISum of Squares	df	Mean Square	F	Sig.	Remark
Corrected Model	260.834	4	65.209	7.119	0.000	
Intercept	147.692	1	147.692	16.124	0.000	
Pretest	200.755	1	200.755	21.917	0.000	
Gender	19.050	1	19.050	2.080	0.153	
School Type	7.089	1	7.089	0.774	0.382	
Gender*School Type	2.072	1	2.072	0.226	0.002	Not Significant
Error	760.257	83	9.160			
Total	12294.000	88				
Corrected Total	1021.091	87				

Note: $R^2 = 0.255$ (Adjusted $R^2 = 0.220$)

The results show that gender and school type do not significantly moderate the influence of gamified strategies on vocabulary acquisition. Therefore, the null hypothesis is not rejected.

The findings revealed that gamified instructional strategies significantly enhance vocabulary acquisition among primary pupils. This aligns with Ikpat (2025) assertion that gamification improves motivation and engagement, leading to better learning outcomes. The researchers believe that gamified strategies make learning enjoyable and interactive, encouraging pupils to actively participate in vocabulary-building activities.

Moreover, the research underscores that gender and school type do not substantially affect the efficacy of gamified techniques. This study supports the research of Maryati, Retnowati, and Thoe (2022), which indicated no significant disparities in academic performance between male and female learners or between public and private school learners when suitable teaching tactics were employed.

CONCLUSION AND RECOMMENDATIONS

Based on the findings above, it is evident that gamified instructional strategies significantly enhance vocabulary acquisition among primary pupils in Oyo East Local

Government Area. Integrating these strategies into teaching practices can improve pupils' language skills and foster a love for learning. These improvements will not only enhance academic performance but also prepare pupils for future educational challenges.

The researchers recommended that:

i. Teachers should integrate gamified instructional strategies into their teaching practices to create engaging and interactive learning experiences for primary pupils.
ii. Government and stakeholders should provide adequate resources, including digital tools and training programmes, to support teachers in adopting gamified strategies.
iii. Continuous professional development programmes should be organized for teachers to equip them with strategies for effectively using gamified approaches in primary education.

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