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COMPARATIVE EFFECTS OF BLENDED LEARNING AND TRADITIONAL CLASSROOM INSTRUCTION ON IMPROVING SECONDARY SCHOOL STUDENTS' PERFORMANCE IN ENGLISH GRAMMAR IN ABIA STATE, NIGERIA

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ABSTRACT

This study investigated the comparative effects of blended learning and traditional classroom instruction on improving secondary school students' performance in English grammar in Abia State, Nigeria. A quasi-experimental pretest–posttest control group design was employed with 88 Senior Secondary Two students divided into experimental (blended learning) and control (traditional instruction) groups. The English Grammar Achievement Test (EGAT) was used for data collection, and ANCOVA analysis revealed a statistically significant improvement in grammar achievement for the blended learning group, with a large effect size (partial eta squared = 0.18). Findings underscore the value of multimodal resources—videos, animations, and interactive quizzes—in promoting engagement, immediate feedback, and retention. The study concludes that combining both approaches provide the most effective instructional strategy, allows educators to benefit from the strengths of both traditional and technology-enhanced learning environments in the promotion of English grammar in Nigerian secondary schools.

Keywords: blended learning, English grammar, ICT integration, secondary education, Nigeria, language pedagogy, quasi-experimental design

Introduction

English grammar is a cornerstone of communicative competence and academic achievement. In Nigeria, where English serves as the official language of instruction, governance, and assessment, proficiency in grammar is not merely a linguistic skill but a prerequisite for educational success and social mobility. Reports from the West African Examinations Council (WAEC) and

National Examinations Council (NECO) consistently highlight poor performance in English Language, with grammar errors being a major contributor to failure rates (WAEC and NECO 2022). This persistent challenge underscores the need for innovative pedagogical approaches that move beyond traditional teacher-centred methods.

Blended learning and traditional classroom instruction are two major instructional approaches used in contemporary educational systems. Traditional classroom instruction refers to a face-to-face teaching method where the teacher delivers lessons physically in the classroom, while blended learning combines face-to-face teaching with online or digital learning activities. With the advancement of educational technologies, researchers have increasingly examined the effects of these approaches on students' academic achievement, engagement, motivation, and learning outcomes (Hussain, 2024). However, traditional classroom instruction still plays a crucial role in facilitating direct knowledge transmission. Face-to-face instruction allows teachers to explain difficult concepts immediately and provide instant feedback, which can enhance students' understanding and performance.

However, despite these global findings, empirical evidence from Nigerian secondary schools remains limited. Most classrooms continue to rely on lecture-based delivery, which often fails to engage learners or address diverse learning needs. The study therefore investigates the comparative effects of blended learning and traditional classroom instruction on improving secondary school students' performance in English grammar in Abia State, Nigeria. Specifically, it compares the outcomes of students taught with blended learning against those taught with traditional instruction. The research is guided by the following questions:

1. What is the effect of blended learning on students' achievement in English grammar compared to traditional instruction?
2. Is there a statistically significant difference in post-test performance between students exposed to blended learning and those taught traditionally?
3. What implications do the findings hold for English language pedagogy in Nigerian secondary schools?

By addressing these questions, the study contributes to the growing body of literature on technology-enhanced learning and provides context-specific insights for Nigerian educators and policymakers.

Review of Literature

Concept of Blended Learning

Blended learning is defined as the purposeful integration of face-to-face instruction with online learning experiences (Garrison & Kanuka, 2004). It is not a simple addition of technology to classroom teaching but a pedagogical redesign that combines the strengths of both modalities. Models of blended learning include rotation (students

alternate between online and classroom activities), flex (online learning is the primary mode with teacher support), and enriched virtual (students split time between online and in-person sessions). These models offer flexibility and personalization, making them particularly suitable for grammar instruction, which requires repeated practice and immediate feedback.

Blended Learning and Grammar Acquisition

Grammar learning often suffers from monotony when taught through lectures. Digital tools such as animations, grammar games, and online quizzes introduce interactivity and variety. (Ahmad, 2023) found that blended learning improved ESL learners' grammatical accuracy and confidence. (Fehaima, 2023) reported similar findings among EFL learners, noting that blended instruction facilitated long-term retention. (Qindah, 2018) emphasized that technology-based grammar lessons provided immediate corrective feedback, which is crucial for mastering complex rules.

Student Engagement and Participation

Blended learning has also been found to improve students' engagement and participation in the learning process. Digital tools such as learning management systems, online discussion forums, and multimedia resources create interactive learning environments that encourage students to actively participate in lessons. Research shows that blended learning environments increase student engagement because they provide varied learning activities and allow learners to interact with course materials beyond the classroom setting. It supports collaborative learning through online discussions, group tasks, and peer feedback. These activities encourage active learning and foster critical thinking skills among students (Khan M. and Khan. S 2024). In contrast, traditional classroom instruction promotes direct social interaction among students and teachers. Physical classroom discussions, group work, and teacher-student communication help students develop interpersonal skills and collaborative learning abilities. Traditional classroom settings also enable teachers to observe students' reactions and adjust their teaching strategies accordingly.

Flexibility and Accessibility

Blended learning is flexible. Students can access course materials anytime and anywhere through digital platforms, making learning more convenient and accessible. Blended learning allows students to study at their own pace and revisit difficult topics outside classroom hours. This flexibility is particularly beneficial for students who need additional time to understand complex concepts. However, traditional classroom instruction may lack such flexibility because learning occurs mainly during scheduled classroom sessions. Students must attend classes at specific times and locations, which may limit opportunities for independent or self-paced learning (Shi, Wu and He, 2025).

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Development of 21st-Century Skills

Blended learning is also associated with the development of digital literacy and other 21st-century skills. By integrating technology into instruction, students become familiar with digital tools, online collaboration, and multimedia communication. These skills are increasingly important in modern educational and professional environments (Qindah, 2018).

Academic Achievement

One of the major effects of blended learning is improvement in students' academic achievement. Studies indicate that combining online resources with classroom instruction allows students to review learning materials repeatedly and at their own pace, which enhances comprehension and retention. A meta-analysis of blended learning studies found that students exposed to blended learning often demonstrate higher knowledge acquisition compared with those in traditional classroom settings because digital materials allow flexible review and practice (Onwuagboke, Nwakanma and Umunne, 2025).

Challenges of Blended Learning

A major challenge is the dependence on technological infrastructure such as computers, internet access, and digital learning platforms. In many developing countries, including Nigeria, inadequate technological facilities and unstable internet connectivity can hinder the effective implementation of blended learning.

Another challenge is the need for students to possess strong self-discipline and time-management skills. Without proper guidance, some students may struggle to complete online learning tasks or remain motivated outside the classroom environment.

Strengths and Limitations of Traditional Classroom Instruction

Traditional classroom instruction remains an essential teaching method due to its structured learning environment. Face-to-face teaching allows teachers to monitor students closely, provide immediate feedback, and maintain discipline within the classroom. However, traditional instruction may limit students' access to diverse learning resources and technological tools. Learning is often teacher-centered, and students may have fewer opportunities for self-paced learning and digital interaction compared with blended learning environments (Hussain, 2024).

Globally, the integration of digital technologies into education has transformed instructional practices. Blended learning, which combines face-to-face teaching with online resources, has emerged as a promising model. It leverages multimedia tools such as videos, animations, interactive quizzes, and discussion forums to create multimodal learning environments. These environments foster active engagement, self-paced learning, and immediate feedback, all of which are critical for mastering grammar rules and usage (Fehaima, 2023). Several international studies have demonstrated the effectiveness of blended learning in language

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acquisition. For instance, (Ahmad, 2023) reported significant improvements in ESL learners' grammatical accuracy when exposed to blended instruction. Similarly, (Qindah, 2018) found that technology-supported grammar lessons enhanced retention and comprehension.

Theoretical Framework

Blended learning is grounded in several educational theories:

- **Constructivism**: Learners actively construct knowledge through interaction with digital tools and peers.
- **Vygotsky's Social Learning Theory**: Online forums and collaborative activities extend the zone of proximal development by enabling peer support.
- **Cognitive Load Theory**: Multimedia resources reduce extraneous cognitive load, allowing learners to focus on essential grammar rules.

These frameworks suggest that blended learning can enhance grammar acquisition by promoting deeper processing and social interaction.

Empirical Studies in Nigeria

While blended learning has been widely studied in higher education, research in Nigerian secondary schools is sparse. Studies in Lagos and Abuja have shown positive effects of ICT integration on language learning, but few have focused specifically on grammar. Most Nigerian classrooms still rely on chalk-and-talk methods, with limited access to digital resources. This gap highlights the need for empirical evidence from public secondary schools in regions like Abia State, where ICT infrastructure is gradually expanding.

The identified gap

The literature reveals three major gaps:

1. Limited research on blended learning in Nigerian secondary schools.
2. Insufficient focus on grammar performance, as most studies emphasize reading or writing skills.
3. Lack of context-specific evidence from rural and semi-urban schools, where ICT access is uneven.

This study addresses these gaps by providing empirical data on the effectiveness of blended learning in improving grammar performance among secondary school students in Ebonyi State.

Methodology

Research Design

This study adopted a quasi-experimental pretest–posttest control group design. This design was appropriate because intact classes were used, making random assignment impractical. The design allowed for comparison of student achievement between the experimental group (blended learning) and the control group (traditional instruction), while controlling for initial differences through pretesting.

Population and Sample

The population comprised all Senior Secondary Two (SS2) students in public

secondary schools in Ebonyi State, Nigeria. Two intact SS2 classes were purposively selected from schools with basic ICT facilities. One class (n = 45) was assigned to the experimental group, while the other (n = 43) served as the control group. The sample size was considered adequate for statistical analysis, consistent with similar quasi-experimental studies in education.

Instrumentation

The English Grammar Achievement Test (EGAT) was developed by the researcher and validated by experts in language education. The test consisted of 50 multiples-choice items covering topics such as tenses, concord, prepositions, and sentence structure. Reliability was established using the Kuder–Richardson formula (KR-20), yielding a coefficient of 0.82, indicating high internal consistency.

Procedure

Experimental Group (Blended Learning):

- Face-to-face explanation of grammar rules.
- Online videos and animations illustrating grammar concepts.
- Interactive grammar quizzes administered via Google Forms.
- Digital assignments submitted through WhatsApp and email.

Control Group (Traditional Instruction):

- Teacher-centred lectures.
- Chalkboard explanations.
- Paper-based exercises.

The intervention lasted six weeks, with three 40-minute lessons per week. Both groups covered the same grammar topics, ensuring comparability.

Ethical Considerations

Permission was obtained from school authorities, and informed consent was secured from students and parents. Confidentiality was maintained, and participation was voluntary.

Data Analysis

Descriptive statistics (mean, standard deviation) were used to summarize performance. Analysis of Covariance (ANCOVA) was employed to test for significant differences between groups, using pretest scores as covariates to control for initial differences.

Results

Descriptive Statistics

Table 1 presents the mean and standard deviation scores for both groups.

Table 1: Pretest and Posttest Scores of Experimental and Control Groups

Group	N	Mean (Pretest)	Mean (Posttest)	SD
Experimental	45	28.40	63.85	8.62
Control	43	29.10	51.20	7.15

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The table shows that while both groups improved after instruction, the experimental group recorded a much higher post-test mean score.

ANCOVA Results

Table 2 presents the ANCOVA results comparing posttest scores while controlling for pretest differences.

Table 2: ANCOVA of Posttest Scores by Group

Source	SS	df	MS	F	Sig.
Group	1420.55	1	1420.55	18.72	.000*
Error	6402.10	86	74.45		

*p < 0.05

The ANCOVA results indicate a statistically significant difference in posttest performance between the groups, favouring the blended learning group.

Effect Size: Partial eta squared was calculated to determine the magnitude of the effect. The value of 0.18 suggests a large effect size, indicating that blended learning had a substantial impact on grammar performance.

Discussion of Findings

The findings of this study reveal that blended learning significantly improved secondary school students' performance in English grammar compared to traditional instruction. This outcome aligns with global evidence that technology-enhanced learning environments foster deeper engagement and comprehension. The experimental group's substantial improvement suggests that multimodal resources—videos, animations, interactive quizzes—provided richer learning experiences than chalk-and-talk methods.

The improvement in grammar performance can be attributed to several factors:

- **Active engagement**: Blended learning encouraged students to interact with digital tools, promoting active rather than passive learning.
- **Immediate feedback**: Online quizzes provided instant correction, reinforcing grammar rules more effectively than delayed teacher feedback.
- **Self-paced learning**: Students could revisit videos and animations outside class, accommodating diverse learning speeds.
- **Multimodal input**: The combination of visual, auditory, and textual resources catered to different learning styles, enhancing retention.

Empirical Framework

The results corroborate (Ahmad, 2023), who found that blended learning improved ESL learners' grammatical accuracy. Similarly, (Fehaima, 2023) reported that blended instruction facilitated long-term retention of

grammar concepts among EFL learners. (Qindah, 2018) emphasized the role of technology in providing corrective feedback, which this study also observed as a key factor in improved performance.

Theoretical framework

The findings support **constructivist theory**, which posits that learners actively construct knowledge through interaction. Blended learning provided opportunities for students to explore grammar rules interactively, rather than passively receiving information. Vygotsky's **social learning theory** is also reinforced, as online discussions and peer collaboration extended the zone of proximal development. Furthermore, **cognitive load theory** explains why multimedia resources enhanced learning: by reducing extraneous load, students could focus on essential grammar concepts.

Conclusion

In conclusion, both blended learning and traditional classroom instruction have significant effects on students' learning experiences. Blended learning enhances flexibility, engagement, academic performance, and digital literacy by integrating technology with classroom teaching. On the other hand, traditional classroom instruction promotes direct interaction, structured learning, and immediate feedback from teachers. Many scholars therefore suggest that combining both approaches provides the most effective instructional strategy, as it allows educators to benefit from the strengths of both traditional and technology-enhanced learning environments.

Recommendations

Based on the findings, the following recommendations are proposed:

1. There should be integration of Blended Learning in Teaching English grammar
2. There is need for provision of ICT Infrastructure to Schools for better understanding of blended learning.
3. Teacher training programs should emphasize digital pedagogy.
4. Curriculum planners should integrate technology-based activities into the English Language curriculum, ensuring that grammar instruction is interactive and multimodal.
5. Policymakers should prioritize ICT integration in secondary education. National and state education boards should provide guidelines and funding for blended learning initiatives.

Educational Implications

The study has several educational implications:

- **Curriculum design**: English language curricula should incorporate blended learning activities, ensuring that grammar instruction is interactive and multimodal.
- **Teacher training**: Professional development programs must equip teachers with digital pedagogy skills,

enabling them to design and deliver blended lessons.

- **ICT infrastructure**: Schools need investment in internet access, projectors, and computer laboratories to support blended learning.
- **Policy support**: Government and educational policymakers should prioritize ICT integration in secondary education, recognizing its impact on language performance.

The study's contribution is threefold:

1. It provides empirical evidence on the effectiveness of blended learning in Nigerian secondary schools, addressing a significant gap in the literature.
2. It demonstrates that grammar, often considered difficult and monotonous, can be taught effectively through interactive digital tools.
3. It offers practical recommendations for teachers, schools, and policymakers to integrate blended learning into English language instruction.

Limitations

While the study provides valuable insights, several limitations must be acknowledged:

- **Non-randomized sample**: The use of intact classes limited randomization, which may affect generalizability.
- **Short intervention period**: Six weeks may not capture long-term retention of grammar concepts.
- **ICT access constraints**: Unequal access to digital resources across schools may have influenced outcomes.
- **Focus on grammar only**: The study did not examine other language skills such as writing, reading comprehension, or speaking.
- **Geographical scope**: The study was restricted to Abia State, limiting broader applicability across Nigeria.

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