

# IMPACT OF GOOGLE CLASSROOM INSTRUCTION ON SENIOR SECONDARY SCHOOL STUDENTS' PERFORMANCE IN ENGLISH GRAMMAR IN EKITI STATE, NIGERIA

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## **Abstract**

*This study investigated the impact of Google classroom instruction on senior secondary school students' learning outcomes in English grammar in Ekiti state. The study also determined the difference between the performance of students in physical classroom and their performance using Google Classroom. The study adopted quasi-experimental research design. The population of the study comprised 6,525 Senior Secondary School II students in public secondary schools in Ekiti State. The sample of this study was 120 Senior Secondary School II students selected using multi stage sampling procedure. A self-designed instrument titled "English Grammar Performance Test" (EGPT) was used for the study. Inferential statistical tool such as t-test was used to test the hypotheses. All hypotheses were tested at 0.05 level of significance. The findings from this study showed that there was no significant difference between students' scores in Google classroom and control group before treatment, this implied that the two groups are homogenous. The findings also revealed that there was significant difference in the post-test mean scores of students exposed to Google classroom and the control group. This implied that students exposed to Google classroom performed better than the traditional face-to-face classroom. It was concluded that Google classroom is more effective in enhancing students' learning outcomes in English grammar. Based on the findings of the study, it was recommended that English language teachers should be encouraged to explore and include the use of Google classroom in their teaching and learning process. School managements and government should appropriate funds and see to the use and development of Google classroom facilities.*

**Keywords:** English grammar, Students' performance, Virtual learning, Google classroom.

## **Introduction**

The English language plays a prominent role in Nigeria, as it is a core subject in the curriculum of all Primary, Secondary, and Tertiary Institutions across the country. This mandates students to study the English language as one of the compulsory subjects. Oguntade and Akinwamide (2023) opined that English language learning in Nigeria is given a prominent place because it is used for teaching in schools. As a result, all Nigerian elementary, secondary, and tertiary educational institutions now require

students to take English as a compulsory subject. Examination bodies like the West African Examinations Council (WAEC), National Examinations Council (NECO), and Joint Admission Matriculation Board (JAMB) make English Language a required subject in their examinations because they recognise the economic value of the language for their applicants. Irrespective of students' specialization, all Nigerian higher institutions offer English as a general course which is a prerequisite for graduation and

certification. Deji-Afuye (2019) affirmed that the ultimate goal of studying English language is not only to pass the examination but to acquire competence to communicate in social contexts beyond the school level.

However, students' performance in English language in Ekiti State seems not to be encouraging. Notwithstanding its status as a crucial prerequisite for admission into Nigerian higher education institutions, the English language remains a formidable challenge for numerous students, who consequently exhibit poor academic performance in this subject at the senior secondary school level, highlighting a pressing need for targeted interventions to enhance their language proficiency (Fakeye, 2013). The researcher observed that when students speak or write, they commit grammatical blunders and write incorrect sentences and when students cannot articulate their speech or write appropriately, it may affect their performance in both internal and external examinations. A lack of comprehension regarding grammatical structures and conventions can precipitate significant difficulties in linguistic expression, thereby hindering learners' ability to communicate effectively and accurately convey meaning in the target language. In the West Africa Senior School Certificate Examination (WASSCE), students often struggle with various aspects of the English language proficiency, including inadequate paragraphing, ineffective expression, incorrect use of punctuation, insufficient word count in essays, and adoption of short message service (SMS) language like 'u' instead of 'you', spelling mistakes and misapplication of words, such as using 'there' instead of 'their' (Adenipekun, 2019; Adenipekun, 2020). These issues stem from their limited grasp of fundamental of English grammar rules.

Babalola and Ayodele (2022) observed that English as Second Language (ESL) speakers find it difficult to speak fluently as English native speakers do, nor do they pronounce the words correctly. It seems some students in Ekiti State find it hard to engage in authentic communication using the right words because they have a poor vocabulary repertoire. They lack communicative competence, and for this reason, they seem to shy away from classroom engagement. It appears some students are weak in understanding conversations they listen to in the English language and are weak in their written expressions. However, academic success depends on solid communication skills, beginning with clear oral communication. Students are often called upon in the class to answer questions. These questions may range from those with simple factual answers to questions that involve putting thoughts together and making arguments. Answers to questions need to be communicated effectively so that teachers can assess students' knowledge (Babalola & Ayodele, 2022).

Moreover, it appears that some students seem to be bored with the traditional face-to-face classroom instruction. This traditional method of teaching appears to have become outdated as teachers seem to provide the same repetitive lecture without considering the individual differences of the students. Oguntade and Akinwamide (2023) affirmed that students in the conventional class are usually passive, they are usually very attentive while the teacher explains the concept. The conventional classroom is known to be teacher-centred. The teacher is the one who controls and directs the class. Conventional teaching is assumed to limit the opportunity for students to be creative thinkers. It is generally believed that teachers in

conventional classes are not sensitive to the issue of individual differences. Mostly when questions are posed it is usually the very brilliant students that are quick to respond while others look on. This method does not give enough room for collaborative work and brainstorming among peers.

The traditional method of teaching also appears to be less interactive; students seem to be passive learners; teachers see themselves as know-it-all and the students get distracted easily. Also, it appears that traditional classroom instruction uses a one-size-fits-all approach which does not provide the students with a personalized learning experience, it appears the students follow the same pattern and learning style regardless of their interests which oftentimes makes the class boring and less interactive. According to Sen (2011), an in-depth consideration of Nigerian classrooms revealed inadequacy in the following areas; lack of flexibility of design to accommodate various teaching methods, lack of acoustic considerations in design, and lack of appropriate consideration of climatic data in the design of classrooms. Redaction Team (2023) identified other challenges of traditional classroom instruction as; it is dependent on teachers' availability; it is prone to distractions from external factors such as; noise, interruption or the presence of disruptive students and geographical limitations. No doubt this system operated effectively for an extended duration; however, its efficacy has evolved in light of contemporary realities. The advent of the internet, coupled with advancement in Information and Communication Technology, alongside heightened awareness of diverse learning styles, has underscored the imperative for a progressive and refined education system.

Online learning is commonly managed through a system called Learning Management System (LMS). LMS is a web-based system that allows teachers and students to stay connected with each other. It could help the teachers in the organisation of online courses, engage in several curricula, and interact with students. One of the most popular Learning Management System (LMS) is Google Classroom. Across the globe, Google Classroom is used by thousands of schools and universities that aim to leverage its features for the enhancement of their teaching and learning process.

Google Classroom is a free web service by Google specifically made for schools with the aim of simplifying, creating, distributing and grading lessons in a paperless way. Google Classroom could provide an easy-to-manage teaching and learning platform with various facilities for teachers to provide teaching materials online. Teachers could create and upload slides using Google Slide which works just like Microsoft PowerPoint, teachers could upload or stream live videos from both YouTube, Google Meet and other video platforms, besides, teachers could upload questions using Google form which could be used in assessing students' learning outcomes. Moreover, teachers could easily share files with students using Google Drive without the fear of losing these files as they are automatically backed up to the cloud. Therefore, the teacher could recollect and reuse a file or document.

The main aim of Google Classroom is to restructure the process of sharing files between teachers and students; with features like Google Drive, teachers and students can share files such as instructional materials, textbooks, teaching materials, assignments in PDF, Doc, Video formats, these files could be shared with ease as well. Google Classroom

was introduced as a feature of G-Suite for education, formerly Google Apps for education, on May 6, 2014, followed by its public release on August 12, 2014. In June 2015, Google announced a classroom Application Programming Interface (API) and a share button for websites, allowing school administrators and developers to further engage with Google Classroom. In March 2017, Google opened Google classroom to allow any personal Google users to join classes without the requirement of having a G-Suite (Google Suite) for Education account, and in April, it became possible for any personal Google user to create and teach a class. Google Classroom is one technology designed to enhance the teaching and learning experience of both the teachers and the students. Google Classroom is an education application suite offering productivity tools such as email, documents and storage for students and teachers. The tool offers opportunities for collaboration in real-time and the ability to work remotely, among many other features (Wikipedia, 2022).

Google Classroom is an online platform suited for blended learning, it seems to support students' ease of communication and collaboration with other students, it offers instant feedback from the teacher and provides them with a personalized learning environment (Pappas, 2015). Google Classroom platform seems to make it easy for teachers to monitor students' learning activities without being bound by time limits or class hours. It appears teachers find it much easier to collect assignments, distribute assignments, and discuss subjects taught with the Google Classroom platform from the comfort of their homes. Google Classroom is an interface portal, created by Google companies as an online educational platform. It seems to be very easy to set up and allows

teachers to create classes, distribute assignments, post announcements, send feedback, upload course materials for students to view and interact in the class stream or by email (Hemrungle, Jakkaew, & Assawaboonmee, 2017). It also appears to allow students to work through problems or assignments at their own pace while still receiving support and guidance when necessary. Students could become self-directed, and it produces a learning environment that improves students' knowledge and skills in the subject area (Hemrungle et al, 2017).

Sudarsana, Putra, Astawa and Yogantra (2019) identified three benefits of Google Classroom in the teaching and learning process, this includes; improving teachers' quality and providing the best experience for teachers while conducting the learning process, students will finally be able to use the internet wisely and for education-based programmes. It also saves time for both teachers and students as time will not be wasted on distributing physical materials. Tasks can be done quickly by adjusting schedules.

Moreover, there appears to be applications that can be integrated into Google classroom that could make learning interactive and interesting, especially when it comes to language learning. Apps like Grammarly, Classcraft, Edpuzzle, and Fluency Tutor for Google, Quizlet, Duolingo, Listenwise, Read & Write for Google Chrome, and many others. These apps seem to make it easy to create flashcards, quizzes, games, pronunciation practice, grammar corrections and language exchange platforms. It also includes apps such as GAT+ that help teachers monitor students' behaviour online. There are also websites that seem to have a wide range of resources and learning activities.

### Research Hypotheses

1. There is no significant difference between students' scores in the experimental group and the control group before treatment.
2. There is no significant difference in the posttest mean scores of students exposed to Google classroom and the control group.

### Literature Review

Researchers have identified Google classroom as an effective tool for teaching; Google classroom is a learning aid, both material discussion and work assignments that are given practically without the use of pen and paper and it is mobile. Google Classroom is a free web service by Google for schools that aims to simplify creating, distributing and grading assignments in a paperless way. The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students. It was introduced as a feature of Google Suite (G-Suite) for education, formerly Google apps for education, on May 6, 2014, followed by its public release on August 12, 2014. In June 2015, Google announced a classroom Application Programming Interface (API) and a share button for websites, allowing school administrators and developers to further engage with Google Classroom. In March 2017, Google opened classroom to allow any personal Google users to join classes without the requirement of having a G-Suite for Education account, and in April, it became possible for any personal Google user to create and teach a class (Wikipedia, 2022).

Google Classroom is a technology designed to enhance the student's learning experience. It is an education application suite offering productivity tools such as email, documents and storage for students

and teachers. The tools offer opportunities for collaboration in real-time and the ability to work remotely, among many other features (Wikipedia, 2022). As an online platform for blended learning, Google Classroom supports students in communication and collaboration with others, it offers instant feedback from the teacher and provides them with a personalized learning platform (Pappas, 2015). Google Classroom can be defined as a digital tool that enables students to attend classes online (Hussaini et al, 2020). Teachers can work together with their students without meeting face to face. Teachers can post materials for their students through this medium, they can also make announcements and create assignments and quizzes for students to complete, submit and save online either in a web browser or on Google Classroom App.

The use of Google Classroom provides various facilities for teachers to provide teaching materials online. Teachers can upload power points, and videos from both YouTube and other video platforms. Besides these, the teacher can upload questions using Google Forms which are used as an assessment of students' learning outcomes. Teachers can easily share files with students using Google Drive. McGinnis (2021) outlined the benefits of Google Classroom;

- i. *It modernises classroom management:* The platform integrates with Google's other tools like Docs, Drive, Forms, Meet, and Calendar, so there are many built-in "shortcuts" for classroom-management tasks. For example, if you post an assignment with a due date, it's automatically added to your student's class calendar for them to see.
- ii. *It digitally organizes, distributes, and collects assignments, course*

- materials (like videos, websites, PDFs, and more), and student works:* Teachers also can post an assignment to multiple classes or modify and reuse assignments from year to year. If your students have regular access to devices, Google Classroom can help you avoid some trips to the photocopier and cut down on some of the paper shuffling that comes with teaching and learning.
- iii. *It communicates with students about their classwork:* You can use the platform to post announcements and reminders about assignments, and it's easy to see who has or hasn't completed their work. You can also check in with individual students privately, answer their questions, and offer support.
- iv. *It gives students timely feedback on their assignments and assessments:* Within Google Classroom, it's possible to use Google Forms to create and share quizzes that are automatically graded as students turn them in. One will not only spend less time grading, but also the students will get instant feedback on their work. Teachers can view individual and class data within forms or an automatically generated Google Sheet.

Google Classroom can also help teachers streamline summative and formative assessments. Teachers can use the platform to quickly create, distribute, and collect digital exit tickets or auto-graded assessments. Teachers also can pose discussion questions for quick insights into what students are thinking. With these same tools, teachers can also create summative assessments, like unit tests. These tests can include traditional question types like multiple choice,

short or paragraph answers, checkboxes, and more. There are also options for students to upload files (like movies or photos) when responding to a question or prompt, allowing students to share their knowledge in a variety of ways. Of course, there are plenty of other formative and summative assessment tools out there, many of which now offer Google Classroom integration (McGinnis, 2021).

Recent updates to Google Classroom have included features for grading. Teachers can easily assign points to different assignments, or give different types of assignments (essays, classwork, homework, etc.) different weights. Teachers can also use Google Meet as a video conferencing solution (instead of Zoom). Google Classroom integrates with Google Meet, and teachers can set up video meetings from within Google Classroom for live, or "synchronous," instruction. By default, students cannot begin a meeting before the teacher, or re-join the meeting if the teacher is the last person to leave. Meet videos created from within Google Classroom are only accessible from school-managed Google Workspace for Education accounts. In addition to live-video capabilities, there is a recording feature in Google Meet that gives teachers an easy tool for creating pre-recorded video lessons for asynchronous learning, where students can watch on their own time and pace. Google classroom is a product of digital industry that provides numerous benefits to facilitate virtual teaching and learning (Nagele, 2019). Google classroom is a learning strategy that has evolved into a platform for promoting critical thinking, collaboration, and social interactions with peers and teachers in academic activities.

Oyarinde and Komolafe (2020) determined the impacts of Google classroom as an online learning delivery platform in Secondary Schools

during the COVID-19 pandemic in Nigeria. A mixed method approach was used in the study. Online questionnaire on Google Classroom Attitude Scale (GCAS) was used and online Semi-Structure Interview Guide (SSIG) was developed by the researcher for data collection on the students' perceptions of Google classroom. The researcher used Statistical Package of Social Science programme to calculate and analyse arithmetic mean, standard deviation and t-test. Content analysis was used for the analysis of qualitative data. The participants were 140. The results showed that Google classroom platform as an online learning delivery positively affected students' academic achievement, attitudes and their perception during the pandemic in Nigeria's secondary schools. Based on the findings of the study, it was recommended that education stakeholders should effectively prepare students for the use of this platform for their learning activities during the pandemic. The platform is capable of assisting both students and teachers to connect, work together, create assignments, grade students and post learning materials. Likewise, students can also ask questions about the areas they do not understand. Hence, the advantages of the platform can be brought into use for achieving quality in the teaching and learning process at all levels of education during the pandemic. However, Oyarinde and Komolafe (2020) did not state their area of focus, they used a questionnaire and interview guide to collect data, but this study focused on grammar and the research design used was quasi-experimental research design.

Rakhmawati (2020) investigated the effectiveness of Google classroom on the first semester students' writing skills at STKIP PGRI Tulungagung. This research investigated whether the students

achieve better writing skills after being taught using Google Classroom or not. The design of this research is quantitative research, which is concerned with hypothesis, formulation, testing and analysis of the relationship between two variables; dependent variable and independent variable. Both variables are selected and observed. Based on the statistical calculation using SPSS 16.0, the researcher gave interpretation to significant value. Because the significant value 0.000 was smaller than the significant level of 0.05, it can be concluded that alternative hypothesis ( $H_a$ ) was accepted and the null hypothesis ( $H_0$ ) was rejected. It means that there was a significant effect after using Google classroom to teach writing. Thus, it can be concluded that using Google classroom in teaching writing in the first semester at STKIP PGRI Tulungagung in the academic year of 2018/2019 is effective. In the conclusion, teaching writing by using Google classroom is more effective and interesting for the first semester students at STKIP PGRI Tulungagung in the academic year 2018/2019. By using Google Classroom, students hopefully can increase their Writing skills. Teachers should give motivation to students so that they will be more interested in learning activities. The researcher hopes that this study will be useful for further researchers to conduct similar research that deals with the same media, and with the same or different research design to develop the teaching quality of writing skills by using Google classroom. However, Rakhmawati (2020) focused on students' writing skills as well as higher institution students and was carried out in Tulungagung but this study focused on grammar, secondary school two students and was carried out on students in Ekiti State.

## Research Method

The study employed quasi-experimental pretest, post-test two group design. The base line of the knowledge of the students that will be used for the study was established by pretest while post-test was used after the treatment to measure learning outcomes. The population of this study comprised 6,525 Senior Secondary School Two students in Ekiti State (Ministry of Education, 2022). These schools spread across all the three Senatorial districts with sixteen Local Government Areas of Ekiti State. These schools are located in both rural and urban areas. The sample for this study consisted 120 senior secondary school II students which entailed 61 male and 59 female students spread across experimental and control groups using multi-stage procedure. At the first stage, one senatorial district was selected for the purpose of this research using simple random sampling technique. The second stage involved the selection of two Local Government Areas using simple random sampling technique. In the third stage, four senior secondary schools were selected using stratified random sampling technique. One Hundred and Twenty (120) students were selected from the schools using purposive sampling techniques. Students with access to internet devices such as smartphone and laptop computers were selected for the study.

A self-designed research instrument titled “English Grammar Performance Test” (EGPT) was used to collect data for this study. This instrument tested the performance of students in English Grammar. The instrument consisted of a 20-item question with multiple choice items. The instrument was used for the pretest and posttest. The instrument was divided into Two sections, Section A was used to collect students’ socio-demographic data such as the name of school and sex. Section B contained Twenty (20) items which were drawn by selecting items relating to the topics covered by this study from the school syllabus; Pronouns, Nominalization of Adjectives and Nominalization of Verbs. Respondents were asked to pick the correct answer from options A-D. Each correct answer was allotted one point. The data collected were analysed using descriptive and inferential statistics. Research hypotheses were tested using t-test. All hypotheses were tested at 0.05 level of significance.

## Results

Hypothesis 1: There is no significant difference between students’ scores in Google classroom and control group before treatment.

In order to test the hypothesis, pretest scores of students in both experimental and control group were subjected to statistical analysis using t-test at 0.05 level of significance. The result is presented in Table 1.

**Table 1: t-test Analysis of Students’ Scores in Google Classroom and Control Group before Treatment.**

Variables	N	Mean	SD	t-value	Sig. value
Google Classroom	66	13.3788	2.50394	4.432	0.08
Control Group	40	11.3250	1.95314		

**$p > 0.05$  (Not Significant)**

The result in Table 1 above shows that the P value is 0.08 which is

greater than the significant of level 0.05. This implied that the null

hypothesis which stated that there is no significant difference between students' scores in Google classroom and Control group before treatment is accepted. Therefore, there is no significant difference between students' scores in Google classroom and Control group before treatment. This means that these two groups are homogenous.

Hypothesis 2: There is no significant difference in the posttest mean scores of students exposed to Google classroom and the control group.

In order to test the hypothesis, posttest mean scores of students in both experimental and control group were subjected to statistical analysis using t-test at 0.05 level of significance. The result is presented in Table 2.

**Table 2: t-test Analysis of Posttest Mean Scores of Students Exposed to Google Classroom and the Control Group**

Variables	N	Mean	SD	t-value	Sig. value
Google Classroom	66	17.1970	2.25470	11.245	0.000
Control Group	40	12.6500	1.54505		

***p < 0.05 (Significant)***

The result in Table 2 above show that the P value is 0.000 which is less than significant level of 0.05. This implies that, the null hypothesis which stated that there is no significant difference in the posttest mean scores of students exposed to Google classroom and Control group is rejected. Therefore, there is significant difference in the posttest mean scores of students exposed to Google classroom and Control group.

### Discussion

The study showed that there was no significant difference between students' scores in Google classroom and control group before treatment. This implied that the performance of students in experimental and control group before treatment are on the same level. This implied that the two groups are homogenous. The finding of the study showed that there was significant difference in the posttest mean scores of students exposed to Google classroom and the control group. This implied that Google classroom has a positive impact on students' performance in English language in senior secondary schools in Ekiti State. This is because Google Classroom is learner-centred and students were very active during the class. Also, this is due to the face that Google Classroom enhances the teaching and learning process. This is in support with Rakhmawati (2020) that there was significant effect after using Google classroom to teach. Also, it is in line with Oyarinde and Komolafe (2020) that Google classroom platform as an online learning delivery positively affected students' academic achievement, attitudes and their perception during the pandemic in Nigeria's secondary school.

### Conclusion

Based on the findings of this study, it was concluded that Google classroom was more effective in enhancing students' learning outcomes in English grammar. It was also determined that Google classroom was prominent and most potent than the traditional physical classroom. It was deduced that Google classroom provided a veritable platform for both teachers and students to utilize digital technological tools for students' engagement in an online environment. The platform promoted active learning which makes the learning materials more accessible to students anywhere anytime. It was also determined that Google classroom, as an online learning platform, offered the advantage of achieving quality in the teaching and learning process at all levels of education.

### Recommendations

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

- ✚ English language teachers should be encouraged to explore and include the use of Google classroom in their teaching and learning process.
- ✚ English language teachers should also sit up and embrace technologies and online facilities to boost their teaching activities.
- ✚ Curriculum planners should make adequate and necessary upgrade to the English language curriculum to address students' individual differences.
- ✚ School managements and government should appropriate funds and see to the use and development of Google classroom facilities.

- ✚ The government should also earmark more funds for the adequate training and re-training of English language teachers on the use of Google classroom.

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