

APPLICATION OF GOOGLE CLASSROOM FOR TEACHING AND LEARNING IN HIGHER INSTITUTION: FEATURES, CHALLENGES AND BENEFITS

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ABSTRACT

Google classroom is one of the Google applications for Education produced by Google Incorporated. This paper therefore covered Google classroom features, benefit of Google classroom and challenges of Google classroom. The review indicated that the features of Google Classroom include single view for student assignments, class arrangement, decimal grading, transfer of class ownership, new class integration, code display for classes, importing Google Form quiz scores, streaming, and commenting. The advantages of utilising Google Classroom encompass: user-friendliness, time efficiency, cloud-based accessibility, flexibility, cost-friendliness, mobile compatibility, effective sharing capabilities, a paperless environment, expedited assignment processing, constructive feedback mechanisms, and a streamlined, intuitive interface, including an excellent commenting system. One of the main issues of Google classroom is that older messages slide lower down the stream when new messages are added. It was recommended that Google Classroom for teaching and learning are relatively new and because technology's scope is ever-widening, studies should be continued to assess new upgrades, product longevity, and sustained applicability.

Keywords: Google Classroom, Computer, Google Apps for Education, Features, Benefit, Challenges.

1. INTRODUCTION

ICT, or information and communication technology, has quickly emerged as one of the fundamental pillars of contemporary civilisation. Understanding it and grasping its fundamental ideas and abilities are now seen as extremely important in schooling in many nations. This is because it improves the organisation and management of educational institutions as well as the learning processes themselves. It includes a variety of technologies that are used to use computer facilities to capture, process, and send data and information. Radio, television, cell phones, computers, networks, hardware and software, satellite systems, and so forth are all included in this broad phrase, along with the different services and applications that go along with them (Agah, Ogbeche & Okorie, 2016).

As a tool to assist the different elements of education, ICT focuses primarily on the implementation of these new technologies in an educational setting and environment. Therefore, it is impossible to downplay the significance of IT equipment in any particular institution or organisation. This is due to the fact that many organisations are quickly realising how inadequate human power and abilities are for dealing with difficult problems on a daily basis. As a result, personal digital assistants (PDAs), smartphones, laptops, PCs, and a variety of applications are frequently used to

make daily activities easier. One popular search engine that may be used to locate information online is Google. Google also developed a number educational apps, including Google Classroom. An app called Google Classroom was created to support educators and learners alike. In 2014, Google Classroom was added to Google Apps for Education. Teachers can easily design and arrange tasks in this classroom, give feedback effectively, and interact with their students with ease. Google is a well-known tool with many intriguing features and uses. Because of its special built-in features that provide pedagogical, social, and technological affordances, it has the potential to be used for teaching and learning, much like many other tools (Wang, Woo, Quek, Yang & Liu 2012). Google Classroom makes it easier for teachers to communicate with their students, create and organise assignments quickly, and give feedback effectively (Kevin & Federico, 2019). As a result, Google created Google Classroom to support a blended learning platform for academic purposes. According to Iftakhar (2016), Google Classroom is now even better since it enables teachers to spend more time with their students and less time on paperwork. Google Classroom now has additional features thanks to a recent update from Google. The option to add multiple teachers and to prepare for sessions in advance are both included in the new capability.

Google Classroom can be easily deployed in the URL classroom.google.com, educators can set up classroom in minutes and create content for students. It is also free for schools, best-in-class security is also included without cost for plan holders. The platform also integrated with other Google tools to help educators provide instant feedback and track a student progress to improve performance, it has also a mobile application for easy access anytime and anywhere (Bustamante, 2018).

Google Classroom essentially uses the architecture of Google Docs, Drive, and other apps to assist teachers in managing the development and collecting of student assignments in a paperless setting. Google Classroom is now even better since it lets teachers spend more time with their students and less time on paperwork. Google Classroom now has additional features thanks to a recent update from Google. The option to add multiple teachers and to prepare for lessons ahead of time are both included in the new capability. Google Classroom may benefit students and staff in a number of ways at universities that have already joined up with Google. With a single point of access to discussion threads, Google Classroom may help students communicate and work more efficiently. In the words of Ventayen, Estira, Guzman, Cabaluna, and Espinosa (2018), Google Classrooms has the following advantages: it is simple to use, saves time, is cloud-based, adaptable, free, and mobile-friendly.

The use of technology for teaching and learning is seen differently by lecturers and students in the majority of higher education institutions. While some educators like experimenting with new technology to improve their teaching and learning, some educators and students discourage others from trying. "I am too old to learn," "I don't get along with technology," "I have never been trained to use those gadgets to teach," and "I don't want to use a technology that would replace me in class" are some popular justifications for not using technological tools.

Teachers cannot ignore the necessity of using new technology in the classroom, even when some of these arguments appear to be sound. Krishna (2015), pointed that teachers will not be replaced by technology, but those who do use technology will replace those who do not. This provocative remark describes how teachers who are afraid to use technology and instead cling to conventional teaching techniques may eventually lose their relevance in the educational system. In light of this, the purpose of this study is to investigate how Google Classroom may be used for both teaching and learning.

Teachers in the majority of Nigerian institutions are still learning how to use Google Classroom (Agah, Ogbeche & Okorie, 2016). Many staff members have acknowledged the benefits of adopting Google Classrooms for educational evaluation, which include reduced administrative costs, time savings, and less strain on lecturers, among other benefits. Despite acknowledging these benefits, it has been noted that some teachers are hesitant to adopt the computerised method as they are used to taking notes and marking questions and/or answers for later review. Some teachers believe that reading on paper is easier and faster than staring at a computer screen. All of these opposing viewpoints could influence attitudes, acceptance, and responses to the use of Google Classrooms in classrooms. Therefore, the objective of this study is to appraise the values of Google Classroom in the educational context. The study's particular objectives are to:

- 1) examine a few of Google Classroom's features.
- 2) consider the advantages of Google Classroom.
- 3) evaluate the difficulties with Google Classroom.

Google Classroom Features

Hamalik (2011) noted that Google Classroom has the following features:
Student assignments in a single view: Every student in a classroom has a page that displays all of their assignments. Teachers and students can use filters to view each assignment, assignments that have been lost, or tasks that have been evaluated and returned. They can also see the status of each task in this view. Teachers can assign students online thanks to this feature. Students can turn in their work in a variety of formats once they have finished it.
Setting up the class: Teachers may use Classroom to set up their classrooms according to the requirements of their particular class. For instance, it helps teachers in setting up according to regular routines and task priorities.

Decimal Grading: Teachers can use assessments that need a high degree of accuracy, like using decimals in their assessments, with ease thanks to Classroom.

Transfer of class ownership: This feature allows the instructor and administrator to give other teachers control of the Google Classroom class without having to start a new one. Google Drive automatically grants new class owners full access to student work.

New Class Integration: This feature makes it simple for instructors to integrate their favourite apps with other programs. For instance, Code.org, Edcite, and Quizizz.

Code display class: This feature allows professors to show their class code in full on the screen, allowing students to join a new class fast.

Incorporate the Google Form Quiz results into the classroom: Teachers may use Google Forms quizzes to measure students' comprehension of a subject in real time. To avoid having to retype the announcement, the instructor will then be able to transfer the results from the previously created quiz straight into the Google Classroom feature. Simply click and spread the word!

Stream: The teacher can engage with every student in the class in this part.

Comment: Google Classroom allows for the use of two different types of comments. There are two types of comments: private and class. If the instructor wishes to communicate with the entire class, class comments are utilised. Students can anonymously remark on their assignments using the private comment feature, which is included in their individual accounts.

Advantages of Google Classroom Usage

Google Classroom offers a number of advantages. Among the advantages are: Simple to use: It's really simple to use. The design of Google Classroom intentionally streamlines the options for delivering and tracking assignments as well as the instructional interface; announcements, email, and push notifications make it easier to communicate with the entire class or with specific students (Janzen, 2014).

Time-saving: Google Classroom was created with time-saving in mind. It streamlines and simplifies the process of distributing documents, assigning grades, conducting formative assessments, and providing feedback. It also combines and automates the usage of other Google apps, such as spreadsheets, presentations, and documents. As noted by Chehayeb (2015), a Google Classroom software engineer, the classroom was created "to save time." He asserts that Google is saving instructors time by introducing tools like sorting by name on the grading page, exporting grades to Google Sheets, making it simpler to adjust the grade point scale, and keyboard navigation for entering ratings.

Cloud-based: Since Google applications make up a substantial percentage of cloud-based workplace communications tools utilised by the professional workforce, Google Classroom offers more authentic and professional technology to employ in learning environments (Mary, 2014)

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Mobile-friendly: Google Classroom is intended to be adaptable and mobile-friendly. Using it on any mobile device is simple. In today's web-connected learning environments, mobile access to visually appealing and user-friendly learning resources is essential (Janzen 2014). Keeler (2014) listed a number of other advantages of Google Classroom use. She points out that Google Classroom makes sure therapy is streamlined by just publishing a notification. According to Crawford (2015), Google Classroom makes group learning easier. Teachers can add resources here and provide students with feedback. Additionally, students have the ability to contribute items and leave personal comments. Additionally, kids are able to work together. By sharing their papers and assignments, they are able to create the finest possible work. Additionally, according to Keeler (2014), Google Classroom promotes student cooperation.

Effective sharing: Google Docs is one of Google product that can be used in Google Classroom. It can be tool for sharing the documents and it is saved online and shared with a limitless number of people. When teacher creates an announcement or assignment using a Google doc, the students can access it immediately through their Google Drive. Teacher just needs to make sure that he/she has shared it with the students. Furthermore, Google Docs are 342 easily organized and

personalized in Google Drive folders. So emails are no longer needed to share information. Teachers just need to create a document and then share it with the students.

Paperless: No more paper needed material and assignment are shared and submitted in a cloud-based location. Also, there is no need to worry about printing out or losing the students work anymore.

Speeds up the assignment process: Google Classroom make the process of learning becoming fast and efficient. The students do not have to meet the teacher to lend out their work. They just need to upload in the provided folder. The teacher can easily see who has submitted their assignment and who is still working on it, as well as offer your feedback immediately.

Effective feedback: Google Classroom gives the teacher the opportunity to offer their online support by giving feedback to the students right away. In other words, feedback becomes more effective, as fresh comments and remarks have bigger impact on students' minds.

Clean and user-friendly interface: Google layout standards stay loyal to clean, Google Classroom invites the user to an environment where every single design detail is simple, intuitive, and user-friendly.

Great commenting system: Comments made by students have the potential to turn into an online class debate. Technology integration in education is not necessarily a recent development. Schools all across the world have been trying to put technology plans into place for decades with the goal of giving their pupils greater opportunities to use technology. Technology is seen to have long-lasting impacts on learners due to its interactive nature and requirement for life after school, in addition to its ability to enhance regular classroom education (Iftakhar, 2016; Keppler, Weiler, & Maas, 2014).

Teacher-centered learning is the current conventional teaching approach, in which lecturers employ visual aids such as presentation slides, a whiteboard, and a visualiser. Four main categories of practical work are used in computer lab learning activities: exercises, experiences, demonstrations, and investigations. As a result, using the existing typical technique in computer lab instruction is not feasible. The computer lab's most practical exercises, like data mining, are by their very nature illustrative or demonstrative, emphasising the development of observational skills while enabling students to observe the idea being studied in action and better connect theory to reality. However, the students' reaction to practical work is often negative as a result they are not effective in laboratory work and this may reflect a student perception that there is lack of clear purpose for the lab hands on task Keppler (2014).

Fethi Kayalar (2016) asserted that education must now place more importance on students' personalized learning, rather than on teaching and that students can and should benefit from an education combined with modern technology (Kayalar, 2016). Similarly, Keppler (2014) expanded upon this same view of the necessity of technology in schools by stating that even the, "students desire a technology-rich learning environment, [one] which provides them opportunities to explore, learn, and take responsibility for their progress". Shampa Iftakhar (2016) summed his research sentiments succinctly: "Teaching in the 21st century does mean teaching 21st generation. It means helping and monitoring the students to learn and implement 21st century skills"

Challenges of Google Classroom

Halverson (2011) identified three major challenges of online learning: privacy, conflict between the learning goals of the participants and the goals of the institution, and challenges related

to a student's possible desire to construct a holistic identity versus an institution's desire to frame participants as students. The notion of conflict over identity is also raised by Manca and Ranieri (2013) and, to a lesser extent, by Dabbagh and Kitsantas (2011) who identified that there might be conflict over the level of personalisation available on the site.

Oliver (2001) identified some concerns regarding the use of Google Classroom. Messages, discussions and activities are posted in the Google Classroom stream, with the most recent messages appearing at the top, while older messages move further down the stream as new messages are added. This means that it can be harder to find older messages as more and more posts to the stream are made, which can necessitate a lot of scrolling for students and instructors.

Studies and Methodological approaches to Google Classroom

Studies on Google Classroom in Nigeria have been carried out in previous literature. Fonseca and Peralta (2018) examined how globalization, information communication technologies (ICTs) play a paramount role in the teaching and learning of foreign languages. The action-research was conducted with a group of sophomore students enrolled in the course Composition at Universidad Nacional, Coto Campus. The study required the administration of two surveys prior to and after the implementation of Google Classroom (GC) as an educational platform to assist students during their learning process of the course. The research was aimed at revealing the students' use ICTs to practice their writing skill outside the classroom and analyzing the impact of GC in the development of the students writing skill out of the school environment. The findings exposed that the use of this platform brings about benefits that allow students and teachers to ease the teaching and learning of writing.

Bondarenko, Mantulenko and Pikilnyak (2015) investigated the experience of organizing blended learning for geography students using Google Classroom, and discloses its potential uses in the study of geography. For the last three years, the authors have tested such inclass and distance courses as "Cartography and Basics of Topography", "Population Geography", "Information Systems and Technologies in Tourism Industry", "Regional Economic and Social World Geography (Europe and the CIS)", "Regional Economic and Social World Geography (Africa, Latin America, Asia, Anglo-America, Australia and Oceania)", "Socio-Economic Cartography".

Shaharane, Jamil and Sarah Rodzi (2015) explored the effectiveness of Google Classroom's active learning activities for data mining subject under the Decision Sciences program. A set of questionnaire has been distributed to a sample of 100 students who enrolled data mining subject were used in this study. The analysis of the data was carried out using Technology Acceptance Model (TAM) to examine the relationship between the identified factors and the effectiveness of the learning activities.

Fitriningtiyas, Umamah, and Sumardi (2019) investigated how technology provides facilities for students to get better results. The study aims to produce interesting and effective learning media in learning history. The results of the analysis found in the field are, learning media that are used is traditional so students are not interested in learning and student learning outcomes are not optimal. One of the technologies that can be used to overcome this problem is using software such as google classroom. Development of this learning media uses the ADDIE model. Google classroom is an application that can save time and paper, distribute tasks, and communicate regularly.

Heggart and Yoo (2018) examined the effectiveness of using Google Classroom for final year primary teacher education students to encourage student voice and agency, and to consider

how the platform might influence future pedagogies at the tertiary level. The data showed that Google Classroom increased student participation and learning and improved classroom dynamics. It also revealed concerns around pace and user experience. This data was used to construct a framework to evaluate the use of online platforms; it identifies four concepts (pace, ease of access, collaboration and student voice/agency) that explore the usefulness of other online learning platforms, as well as pedagogical practice.

Ballew (2017) investigated the role of facilitator and keeper of classroom technology still lies in the hands of the teacher. As teachers attempt to integrate technology and its uses in their classrooms, they also carry with them their preconceived notions and prior experiences with technology. Therefore, the teachers' perceptions can possibly affect the efficacy of the implementation. This study analyzed a school district's Google Classroom integration which included three different grade levels across the district. Teacher perceptions regarding the Google Classroom and its effects on the classroom were measured via a voluntary Likert scale survey. The study aimed to determine whether teachers' years of experience, grade level assignment, and subject matter influenced their perceptions of the technology-based Google Classroom. The chi-square test of independence was utilized to determine if a relationship was found between teachers' perceptions and the three variables. In fact, all three variables were found to have a relationship with teacher perceptions, thereby causing the null hypotheses to be rejected.

2. CONCLUSION

The features of classroom Google Classroom include a single view for student assignments, class arrangement, decimal grading, transfer of class ownership, new class integration, code display class, import the Google form quiz score to class, stream, and comment. Google Classroom offers a number of advantages, such as being simple to use, time-saving, cloud-based, adaptable, free, mobile-friendly, efficient sharing, paperless, accelerating the assignment process, providing effective feedback, and having a clean and user-friendly interface. However, Google Classroom presents challenges for teaching and learning in higher education. Messages, discussions, and activities are posted in the Google Classroom stream, with the most recent messages appearing at the top and older messages moving further down the stream as new messages are added.

3. RECOMMENDATIONS

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

- 1) Google Classroom is a relatively new tool for teaching and learning, and as technology is always evolving, research should be done to evaluate new features, product lifespan, and long-term application.
- 2) Google Classroom is really helpful in terms of operability, understandability, and aesthetics.
- 3) Research should be done to gauge how well students are doing academically across the campus as a whole, not just in the program, when they use blended learning.
- 4) It is advised that this study continue to collect data for future research based on the information gathered, such as the correlation between the profile and the platform's degree of usefulness.

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