Environmental and Institutional Factors and Students' Acceptance of Google Classroom in Higher Education: Evidence from Obafemi Awolowo University

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ABSTRACT

The main aim of this study was to investigate the factors contributing to the acceptance and retention of Google Classroom as a digital learning platform among students in Obafemi Awolowo University, Ile-Ife, Nigeria. The Unified Theory of Acceptance and Use of Technology (UTAUT) was used as the theoretical lens to examine the facilitation condition, performance expectancy and behavioural intention of students' interaction with Google Classroom. The descriptive survey research design was used and data were obtained from 400 respondents from selected faculties of undergraduate students through a structured questionnaire. Descriptive data analysis techniques such as frequency count and percentage were used to analyze the data,

Findings show that most respondents reported that they found it easy to access Google accounts and experienced positive outcomes from collaborative learning and instructional delivery. That most students found Google Classroom to be effective in communication, content delivery, feedback, and learning flexibility, but social, economic, and environmental constraints, like high data costs, unstable electricity supply, and poor support for practical learning were reported as challenges that impacted optimal use of Google. Also, it's influence on the perception of academic achievement and teaching quality was not so pronounced, though. Results also revealed high intentions to continue use and to recommend the platform despite moderate preference levels when compared to other learning systems, by most students.

The findings of the study suggest that Google Classroom is a suitable tool to use for learning, but the success of the use is highly dependent on the technological infrastructure and teaching practices. It suggests the upgrading of digital infrastructure, the strengthening of lecturer training and support from the institution to maximize the positive effects of Google Classroom in higher education institutions.

Keywords: Google Classroom, UTAUT, Technology Acceptance, Higher Education, Environmental Factors, Institutional Support.

INTRODUCTION

Digital technologies have become an integral part of higher education teaching and learning around the globe, revolutionizing the way students learn. Digital technologies have come to play a significant role in the way that teaching and learning take place in higher education all over the world and have revolutionized the way that learners are learning. Learning Management Systems (LMS) are now essential tools for teaching, communicating, administering tests, and facilitating collaborative learning. The COVID-19 pandemic forced many higher education institutions to embrace emergency remote education and heavily dependent on digital learning platforms to meet the academic needs of students for continuity (Bozkurt et al., 2020). While the pandemic is over, a number of universities have continued to implement these technologies as part of blended and hybrid teaching and learning strategies, highlighting the importance of studying what drives learners' uptake and ongoing use of blended and hybrid learning platforms.

Although there are many LMS available, Google Classroom has been very popular because it is user-friendly, accessible, affordable, and integrates with other Google applications like Google Drive, Google Docs, Google Meet, and Google Forms. This platform provides effective content delivery, assignment management, communication, and assessment, which also fosters flexible learning in higher education settings (Brandford Bervell, Kumar, Arkorful, Agyapong, & Osman, 2021; Kumar & Bervell, 2019). To get the most out of the educational opportunities of Google Classroom, however, students need to be willing and able to adapt and utilize the platform effectively.

Several theories have been introduced to explain the use of technology in education, one of which is the Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT was developed by (Venkatesh, Morris, Davis, & Davis, 2003), who assumed that the four factors of a technology's acceptance are the performance expectancy, effort expectancy, social influence, and facilitating conditions. While previous models have emphasized users' perception of usefulness and ease of use, UTAUT makes it explicit that the organizational conditions and the environment are important factors that influence the adoption of technology. Facilitating conditions add to the usefulness of this theory for understanding when and how educational technologies are used effectively, or not.

Empirical analysis has revealed that a variety of technological, environmental, and institutional issues interact to affect students' acceptance of online learning platforms. Perceptions of the ability of a platform to improve student learning outcomes and academic performance (i.e., performance expectancy) have been found to be a key determinant of technology adoption. Similarly, the ease of use of a technology, called effort expectancy, positively affects students' desire to interact with digital learning systems. Besides, the enabling conditions, such as availability of internet connection, availability of digital devices, technical support, and institutional infrastructure, also have relevance for the successful implementation and long-term use of learning management systems (LMS) (Brandford Bervell et al., 2021; Venkatesh et al., 2003; Venkatesh, Thong, & Xu, 2012).

In Africa, the use of online learning technologies has been hindered by the continued problems of infrastructure and institution. Despite the generally positive attitudes of students towards e-learning platforms, limited internet connectivity, high data costs, unstable electricity supply, inadequate technical support and disparities in digital literacy continue to affect their engagement with e-learning platforms (Ansong-Gyimah, 2020). These problems indicate that there is no complete explanation of the acceptance of technology in developing countries without taking into consideration the wider environmental and institutional factors that influence students' learning experience.

During the pandemic, there was a significant raise in the use of online learning platforms in response to the institutional drive to continue teaching and learning at Obafemi Awolowo University, Ile-Ife. Google Classroom is a critical instructional tool, but little empirical research has been conducted to understand what factors contribute to its acceptance and continued use in the university context. In particular, the influence of the availability of the Internet, the power supply, Internet data affordability, the limits of systems, as well as the institutional and pedagogical factors (teaching effectiveness, communication, evaluation, flexibility, academic support) has not been adequately studied.

This study examined the acceptance and use of Google Classroom in Obafemi Awolowo University, Ile-Ife, Nigeria. The Unified Theory of Acceptance and Use of Technology (UTAUT) was used to analyse the factors that drive acceptance and continued use of the platform, including facilitating conditions and students' perceptions. The extension of the topic of digital learning adoption in a developing country context, along with the empirical evidence presented in this study, can provide information for institutional policies and strategies for implementing and sustaining technology-enhanced learning in higher education. This stud, therefore, sets out to assess the environmental and institutional factors influencing students' acceptance and continued use of Google Classroom as a digital learning platform at Obafemi Awolowo University, Ile-Ife, Nigeria.

This following questions will be answered in this study.

1. What is the perceived influence of environmental and infrastructural factors (internet access, data cost, electricity supply, system limitations, and institutional support) on students' acceptance and use of Google Classroom at Obafemi Awolowo University?

2. What are students' perceptions of Google Classroom's effectiveness in supporting teaching and learning, communication, assessment, flexibility, and academic support?
3. What is the perceived level of students' acceptance of Google Classroom in terms of preference, intention for continued use, and perceived academic usefulness?

THEORETICAL FRAMEWORK

The Unified Theory of Acceptance and Use of Technology (UTAUT) model proposed by (Venkatesh et al., 2003) is used in this study as a basis. UTAUT was developed by incorporating eight major technology acceptance theories in a single framework that can explain users' behavioural intention and actual use of information systems. The model describes four main determinants for technology adoption: performance expectancy, effort expectancy, social influence, and facilitating conditions, and predicts the intention to use and use of a technological system for individuals.

The present study is concerned with one of these constructs, namely, facilitating conditions. Facilitating Conditions are the extent to which people think the technical and organizational resources for the technology are available. For higher education, this includes the reliable availability of internet connections, costs of data services, electricity supplies, digital devices and institutional support mechanisms. In developing countries, students' access to digital learning platforms is frequently hindered by infrastructure issues, which are especially significant in these contexts.

Likewise, performance expectancy represents students' confidence that using Google Classroom will improve learning outcomes by facilitating communication, providing access to learning materials, allowing timely assessment and facilitating academic collaboration. Effort expectancy is the ease with which students think Google Classroom can be used to perform learning tasks, and social influence represents the influence of lecturers, peers and institutional expectations on students' willingness to use Google Classroom.

This study is designed to go beyond individual perceptions of technology and addresses environmental and institutional determinants of acceptance. That is why the choice of UTAUT is appropriate. The first objective explores the influence of access to the internet, cost of data, power supply and system constraints and is very similar to the facilitating conditions construct. The second goal, focused on students' perceptions of teaching effectiveness, learning experiences, communication, assessment, flexibility, and academic support, captures the aspects of performance expectancy and effort expectancy. Lastly, student's preference for Google Classroom, willingness to continue using Google Classroom and perceived academic usefulness describe the behavioural outcomes explained by the theory.

The UTAUT explicitly includes contextual and organizational factors that affect technology adoption, unlike previous Technology Acceptance Models (TAMs) that focused mainly on the perceived usefulness and ease of use. It is therefore appropriate that this paper focuses on Google Classroom acceptance in Nigerian Higher Education Institutions as infrastructural and institutional factors have a great impact on students' participation in learning activities on digital platforms.

Given this, the study uses the theoretical framework of UTAUT to explain the influence of the environment and institutions on students' perception of acceptance of Google Classroom in Obafemi Awolowo University. The framework is a comprehensive ground for comprehending the user perceptions in affecting the uptake and ongoing use of educational technologies.

METHODOLOGY

The study adopted a descriptive survey research design, which is appropriate for systematically collecting data from a large population to describe existing conditions and patterns as they naturally occur, without manipulating any variables.

The study was carried out in 2022 and it focused on undergraduate students of Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria, particularly those in faculties where Google Classroom was actively used during the COVID-19 pandemic. The target population included students from the Faculties of Science, Arts, Environmental Design and Management, and Agricultural Sciences which were selected using purposive sampling technique. A total of 400 students were selected, with one hundred students drawn from each faculty using random sampling technique. In addition, respondents were purposively selected based on their minimum exposure of at least three academic sessions to university learning systems and their experience with the use of Google Classroom.

Data were collected using a structured, self-developed questionnaire designed to obtain information on environmental conditions affecting learning, teaching effectiveness, learning experiences, and system-related factors influencing the use of Google Classroom. The instrument consisted of sections covering demographic information and the key variables of interest. All items were structured in a Likert-scale format to capture respondents' perceptions.

The instrument was validated through face and content validation by experts in educational technology and research methodology, who assessed it for clarity, relevance, and appropriateness of the items. Their recommendations were used to refine the final version of the questionnaire.

Reliability of the instrument was established through a pilot study, and internal consistency was assessed using Cronbach's Alpha, which yielded a coefficient of 0.99. This indicates a very high level of internal consistency, suggesting that the instrument is highly reliable for data collection.

Data analysis was carried out using descriptive statistics only, specifically frequency counts and percentages. These were used to summarize respondents' views on environmental factors, teaching effectiveness, learning experiences, and system-related conditions affecting the use of Google Classroom. The results were presented in tables and interpreted descriptively to show the distribution of responses across the study variables.

RESULTS AND DISCUSSION

Demographic Characteristics of Respondents

The demographic profile of respondents shows a near-equal distribution between male and female students, with 202 (50.1%) males and 198 (49.5%) females. This balanced representation enhances the reliability of the findings by reducing gender bias in the interpretation of students' acceptance of Google Classroom. In terms of academic level, 190 (47.5%) of respondents were in 300 level while 210 (52.5%) were in 400 level, indicating that the majority were senior undergraduate students with substantial exposure to institutional learning systems. This suggests that their responses reflect informed evaluations of online learning platforms based on sustained academic experience.

Table 1: Distribution of the Respondents by Sex

Sex	Frequency	%
Male	202	50.1
Female	198	49.5
Total	400	100

Table 2: Distribution of Respondents by Level

Level	Frequency	%
300	190	47.5
400	210	52.5
Total	400	100

Research Question 1: What is the perceived influence of environmental and infrastructural factors (internet access, data cost, electricity supply, system limitations, and institutional support) on students' acceptance and use of Google Classroom at Obafemi Awolowo University?

Table 3: Environmental and Technological Factors Influencing Google Classroom Use

Variables (n = 400)	Agree		Undecided		Disagree	
	Fre.	%	Fre.	%	Fre.	%
I have easy access to a Google account for using Google Classroom.	354	88.5	20	5.0	26	6.5
Google Classroom provides useful assessment features such as quizzes and tests.	216	54.0	92	23.0	92	23.0
Google Classroom supports effective communication between lecturers and students.	191	47.75	77	19.25	132	33.0
Google Classroom enables students to share learning experiences easily.	317	79.25	35	8.75	48	12.0
Google Classroom supports the use of multimedia and other virtual learning resources.	180	51.75	49	12.25	171	43.5
The cost of internet data influences my use of Google Classroom.	332	83.0	30	7.5	38	9.5
Google Classroom integrates well with other digital learning tools.	225	56.25	39	9.75	133	33.25
Reliable electricity supply enhances my use of Google Classroom.	310	77.5	38	9.5	52	13.0
Google Classroom supports both theoretical and practical learning activities.	59	14.75	68	17.0	273	68.25

The results presented in Table 3 shows that students' use and acceptance of Google Classroom at Obafemi Awolowo University is influenced to a significant level by environmental and institutional factors. The findings are closely related with a construct of Unified Theory of Acceptance and Use of Technology (UTAUT) regarding the importance of infrastructural, technical and organizational support in facilitating effective use of technology (Venkatesh et al., 2003). The finding indicates that 88.5% of the respondents were able to access Google accounts easily, indicating that basic access challenges to Google Classroom have been largely addressed. This is an increase in a student's initial digital readiness, probably due to more students having access to smartphones and more exposure to Google Workspace tools in schools. The result is different from previous research conducted in comparable developing environments, which showed that access to digital accounts was a major obstacle to the use of online learning systems, suggesting a moderate decline in lower-level restrictions to LMS.

As far as assessment functionality goes, 54.0% found Google Classroom to have helpful tools like quizzes and tests; a significant portion was however not certain. This is an average degree of alignment, indicating unequal access to the assessment aspects of the platform. This is in line with (Brandford Bervell et al., 2021) who believe the success of LMS tools is dependent on the pedagogical integration by the lecturer and not the system itself. The assumption is that not using advanced assessment attributes a lot diminishes students' perceived value of the platform in assessment.

Likewise, there was disagreement on the effectiveness of the communication with 47.75% agreeing and 33.0% disagreeing. This means that Google Classroom can be used to improve lecturer–student communication, but not in every class. This is in line with (Kumar & Bervell, 2019) who state that active involvement of the instructor and clear and organized communication strategies are key to improving communication in LMS environments. The finding is therefore not a reflection upon technological weakness, but upon pedagogical variations.

By comparison, a majority (79.25%) said Google Classroom facilitates peer interaction, and the sharing of learning experiences. This suggests that the platform is more effective in facilitating students' collaborative learning. This result confirms the performance expectancy construct in UTAUT that suggests that perceived usefulness is a key influence on technology acceptance. It is also consistent with the study conducted by (Al-Maroof & Al-Emran, 2018) which established a strong association between the perceived usefulness of LMS adoption and collaboration and knowledge sharing. This indicates that one of the most successfully achieved gains from using Google Classroom in the context of study is peer interaction.
The perception of integration with multimedia, however, was not homogeneous as 51.75% agreed and 43.5% did not. While Google Classroom allows for videos, documents, and links to other resources, the mixed responses indicate that this is not always the case. This is partially different from the view of (Kumar & Bervell, 2019)

who found out that individuals were more satisfied with LMS multimedia features. The difference may be explained by the fact that there are limitations in the infrastructure, which are mostly bandwidth and digital competence of the lecturers in incorporating the use of multimedia in teaching and learning.

An important discovery is that 83.0% of respondents stated that Internet data cost affected their use of Google Classroom. This aligns with the findings of others such as (Ansong-Gyimah, 2020) who noted that one major challenge to digital learning in developing countries is internet affordability. This serves as further evidence of the economic barrier as a primary cause of digital inequality in higher education in Africa, not opposition to adopting technology. High cost of data usage may decrease frequency and continual engagement with learning activities.

Likewise, 77.5% said that having a reliable electricity supply improves their use of Google Classroom. This is in line with (Bozkurt et al., 2020), who emphasize the continuing structural challenge of electricity instability in developing regions for e-learning. This study's findings align with those found around the world, and establish infrastructural stability as a key factor for continued engagement in technology-mediated learning environments. When it came to system integration, 56.25% of respondents said that Google Classroom integrated well with other digital tools, whereas 33.25% said it didn't. While it seems to be well-suited for Google Workspace apps like Drive, Docs, Meet and Forms, the mixed reviews suggest that not all students are taking full advantage of the integration options or are even aware of them. This is consistent with (Venkatesh et al., 2012) who point out that perceived usefulness has to do with user competency and familiarity with the system as well as system design.

A very negative perception was observed about the use of the platform for practical learning activities, with only 14.75% agreeing that the platform is suitable for practical learning, whereas the majority, 68.25%, disagreed. This is an important structural problem for Google Classroom, in disciplines that are lab-intensive, demonstration-intensive, or hands-on. It is consistent with (Rogers, Salazar, & Buladaco, 2025) which state that LMS can facilitate content delivery and communication better than experiential learning without the use of specific tools.

Overall, the results prove that students adopted Google Classroom because of environmental and institutional factors. Conditions that enable people to access accounts, have access to electricity and to gain access to collaboration opportunities all support adoption, whereas constraints like data costs, infrastructural instability and lack of pedagogical integration hinder optimal use. The findings are consistent with UTAUT, as facilitating conditions are found to be crucial factors affecting technology acceptance. But the results also imply that creating conditions that enable use is not enough for long-term and useful use. Pedagogical integration, lecturer digital competence and knowing the functionalities of the system are also vital to leverage the benefits of Google Classroom. Therefore, infrastructure, internet expenses and instructional design are important factors to consider for improving student acceptance and adherence to Google Classroom in Higher Education.

Research Question 2: What are students' perceptions of Google Classroom's effectiveness in supporting teaching and learning, communication, assessment, flexibility, and academic support?

Table 4: Students' Perceptions of Teaching Effectiveness

Variables (n=400)	Agree		Undecided		Disagree	
	Fre.	%	Fre.	%	Fre.	%
My lecturers use Google Classroom effectively to deliver course content.	313	78.25	41	10.25	46	11.5
My lecturers organize learning activities effectively through Google Classroom.	302	75.5	45	11.25	53	13.25
Google Classroom improves communication between my lecturers and students.	305	76.25	42	10.5	53	13.25
My lecturers provide timely feedback through Google Classroom.	309	77.25	52	13.0	39	9.75

Google Classroom helps my lecturers manage assignments and assessments effectively.	222	55.5	38	9.5	140	35.0
My lecturers use Google Classroom to encourage collaborative learning.	270	67.5	52	13.0	78	19.5
Google Classroom enables my lecturers to monitor students' learning progress effectively.	131	32.75	100	25.0	169	42.25
My lecturers share learning materials promptly through Google Classroom.	275	68.75	46	11.5	79	19.75
Google Classroom improves the effectiveness of teaching in my courses.	289	72.25	51	12.75	60	15.0
Learning through Google Classroom enhances the quality of teaching I receive.	97	24.25	65	16.25	238	59.5

As shown in Table 4, students' perceptions of Google Classroom in terms of the degree of teaching effectiveness are generally positive regarding the aspects of teaching, instructional management and control, communication, feedback, collaboration, and academic support. The results are mainly attributable to the construct of performance expectancy, which indicates the degree of users' confidence that a technology helps them perform better in their studies or work (Venkatesh et al., 2003).

One of the most important findings is that 78.25% of the respondents agreed that lecturers use Google Classroom effectively to present course material. This indicates that it has become a vital aid to instructional delivery in the university and used by the lecturers to disseminate learning materials and plan the content of the courses. The finding shows that in general, students believe that the digital instructional competence of the lecturers in using the platform in teaching is relatively high.

Likewise, 75.5% of the participants agreed that lecturers provided learning activities well on Google Classroom. This discovery suggests that the platform can be used for instructional planning and coordination, such as scheduling assignments and making announcements, and structuring classes. It mirrors the increasing incorporation of Learning Management System (LMS) into the academic organization, where the media used in the teaching activities are increasingly digital.

When it comes to communication, 76.25% of respondents said that Google Classroom enhanced lecturer–student communication. This suggests that the platform is a valuable communication tool that facilitates information sharing and shortens the learning communication process. As per the existing knowledge of e-learning, effective communication plays an important role in engaging students in the digital learning atmosphere because it helps to eliminate ambiguity and enhances learning clarity.

The study also showed that 77.25% of the respondents agreed that lecturers gave timely feedback in Google Classroom. It is important to mention this because feedback is an integral part of good pedagogy and development of students. Feedback that is timely allows learners to recognise the areas they need to work on and to enhance their performance. The level of agreement indicates that a lot of lecturers are using the feedback tools present in the platform effectively, and are enhancing formative assessment in the institution.

When asked about assessment and assignment management, 55.5% of respondents said that Google Classroom was useful in managing their students' academic tasks, and 35.0% disagreed. While most people have a positive perception, this is balanced with a relatively high proportion that disagreed, which indicates that people don't use the assessment in the same way. This variant is probably due to differences in the digital skills and pedagogies of lecturers. From a UTAUT perspective, this is the effect of facilitating conditions because the effectiveness of a system is not only related to its availability but also its effectiveness in terms of how well users can use its functionalities.

Additionally, it can be seen that the lecturers promote collaborative learning using Google Classroom, which is 67.5% of the respondents who agree. This means that the platform supports interaction in the form of group assignments, accessing resources and discussion-based activities. This outcome is consistent with the

performance expectancy; students believe the platform improves the cooperation in the academic process and learning among the students themselves.

Perceptions of learning progress monitoring were significantly lower; however, 32.75% of respondents indicated that lecturers could effectively monitor students learning progress through Google Classroom, 42.25% disagreed, and 25.0% were undecided. This indicates that students feel that the platform lacks tracking features and/or lecturers don't make full use of the available tracking and monitoring features. This discovery points to a possible area of lack of institutional digital capacity and not to technology being lacking.

On the other hand, 68.75% of the respondents agreed on the prompt sharing of learning materials by lecturers on Google Classroom. It illustrates the platform's contribution to the accessibility of educational materials and fosters lifelong learning. The timely dissemination of materials enhances students' preparedness and supports student learning on their own, thereby consolidating the platform as a learning support system.

The overall effectiveness of teaching was also deemed to be good with 72.25% of those surveyed stating that Google Classroom enhances the overall effectiveness in teaching their courses. This indicates that students see the platform as an asset to improve teaching practice, learning experience and classroom management. This discovery continues the trend of digital learning platforms contributing to blended and technology-supported education in higher education institutions.

While these are positive results, there is a significant difference in opinion on the extent to which there has been any improvement in overall standards of teaching. A smaller number of the respondents, 24.25%, endorsed that Google Classroom improves the overall quality of teaching, whereas 59.5% of the respondents disagreed. This suggests that students recognize the workability of the platform, but they are not necessarily linked with the quality of instruction. This discovery indicates that the quality of teaching is more significantly related to the pedagogical abilities, instructional design and involvement of the lecturer rather than the technological platform itself.

We believe this finding is especially significant in the context of the UTAUT model, because it indicates that the performance expectancy is partly fulfilled but not completely converted into perceived educational transformation. That is, students are aware of the difference between operational efficiency (content delivery, communication, feedback) and substantive pedagogical improvement (teaching quality, learning depth).

Overall, the results suggest that students generally agree that Google Classroom is a useful tool for improving teaching and learning, the provision of information, communication, feedback, collaboration, and access to materials. It is not however as effective in regions with more complex pedagogical change, like the enhancement of teaching quality or learning monitoring.

The theoretical results show significant support for the UTAUT construct of performance expectancy because the main reason why students accept the system is, they think that it can help them to manage the academic tasks and enhance the accessibility of learning.

Table 5: Students' Learning Experiences with Google Classroom

Variables (n = 400)	Agree		Undecided		Disagree	
	Fre.	%	Fre	%	Fre	%
Google Classroom simplifies learning across different types of courses.	175	43.75	56	14.0	169	42.25
Google Classroom contributes positively to my academic performance.	148	37.0	45	11.25	207	51.75
Google Classroom enhances my information literacy skills.	232	58.0	66	16.5	102	25.5
Google Classroom allows me to revisit learning materials whenever necessary.	308	77.0	34	8.5	58	14.5

Google Classroom complements face-to-face classroom learning effectively.	350	87.5	28	7.0	22	5.5
Google Classroom helps me remain engaged during learning activities.	221	55.25	60	15.0	119	29.75
Google Classroom encourages independent learning.	242	60.5	98	24.5	60	15.0
Google Classroom increases my confidence in using digital learning technologies.	314	78.5	43	10.75	43	10.75

The results in Table 5 suggest that students' general perceptions of Google Classroom are positive regarding learning experiences and functional strengths. The findings indicate that Google Classroom offers a course management system that is flexible and supportive for learning, boosts access to educational materials, allows for academic activities to be carried out and supports the development of digital learning skills in undergraduate students.

A significant proportion of the respondents (87.5%) felt that Google Classroom was successful in complementing face-to-face classroom teaching; and 77.0% said that Google Classroom enabled them to review learning materials when needed. Also, 78.5% said that the platform increased their trust in digital learning technologies. The results show that Google Classroom is a tool that can help to implement blended learning, as students can access educational materials at any time and develop digital skills, which are a key part of modern education.

The findings also demonstrate that 60.5% of the respondents found that Google Classroom helps in promoting independent learning, 58.0% found it helpful on developing information literacy skills and 55.25% found it helpful that Google Classroom keeps them involved in learning activities. The results indicated that the platform was conducive to self-directed learning, as it allows students to learn on their own and at their own speed, and to engage in learning activities outside of the classroom.

There was less positive feedback about its direct influence on academic outcomes, however. Nearly half of the participants (43.75%) said that Google Classroom made learning easier in various kinds of courses, whereas another 42.25% disagreed. More significantly, 37.0% said that the website had a positive effect on their schoolwork, while 51.75% disagreed. This implies that while Google Classroom offers improved accessibility and organization of learning, it does not necessarily lead to a significant improvement in students' academic performance when used independently. There are several factors that may affect learning outcomes, such as the quality of the learning process, student motivation, the pedagogical methods used in learning, and the subject matter.

Students were also able to identify a few strengths of the system they are using, Google Classroom. Majority (75.75%) agreed that the platform is flexible in teaching and learning, and 73.5% agreed that it is an effective virtual learning environment. Likewise, 71.75% stated that Google Classroom is effective in supporting the academic administration and facilitates course management, making it an efficient system for assignment submissions.

The results also reveal that 61.0% of the respondents found Google Classroom to be a cost-effective learning platform and 57.0% agreed that the platform is helping to minimize reliance on printed learning materials. The perceptions reflect the platform's role in fostering sustainable and technology-based learning methods, which helps minimize the need for physical resources and makes learning more accessible.

When asked about communication and higher order learning outcomes, 54.0% of respondents found Google Classroom to be an effective tool for information and communication, and 53.0% of them felt that the platform encourages critical thinking and problem solving. The results indicate that the platform offers opportunities for interaction and active learning, but that the levels of agreement are not very high, suggesting that this may be dependent on the manner in which lecturers use the platform in their teaching.

Nevertheless, respondents pointed to some shortcomings in the platform's interactive features. When asked about the effectiveness of Google Classroom in creating interaction and feedback between students and lecturers, only 41.5% agreed while 43.25% disagreed. Similarly, 36.0% believed that the platform facilitates collaboration

outside the classroom, and 44.75% disagreed. The results indicate that Google Classroom is effective in content management and administrative tasks; however, it does not seem to be fully leveraged or as effective at collaborative and interactive learning tools as other digital learning platforms.

The results overall indicate that students find Google Classroom to be a helpful and adaptable educational environment that improves access to learning materials, fosters independent student learning, simplifies the management of assignments and promotes digital competence. But doubts about its influence on learning, interaction, feedback and collaboration suggest that the platform's educational value is to a large extent dependent on how the pedagogical use is carried out and how the various features are used by lecturers.

The results are in line with the Unified Theory of Acceptance and Use of Technology (UTAUT) construct of performance expectancy: Users are more likely to accept and continue using a technology when they believe that it can increase their performance and learning results. The overall positive perceptions found in this study indicate that Google Classroom has some functional strengths that can promote students' acceptance. Despite these efforts, further enhancements of interactive learning approaches, collaborative efforts, and feedback processes could further improve students' experiences and encourage continued use of the platform in Higher Education Institutions.

Research Question 3: What is the level of students' acceptance of Google Classroom as a learning platform in terms of preference, continued use, and perceived academic usefulness?

Table 6: System Acceptance

Variables (n = 400)	**Agree**		**Undecided**		**Disagree**	
	Fre.	%	Fre.	%	Fre.	%
I prefer Google Classroom to other learning platforms.	216	54.0	82	20.5	102	25.5
I intend to continue using Google Classroom for my studies.	287	71.75	38	9.5	75	18.75
I would recommend Google Classroom to other students.	294	73.5	47	11.75	59	14.75
Google Classroom is useful for my academic activities.	244	61.0	58	14.5	98	24.5
I would like more courses to be delivered through Google Classroom.	228	57.0	68	17.0	104	26.0
I will continue using Google Classroom even when face-to-face classes are available.	303	75.75	22	5.5	75	18.75
Overall, I accept Google Classroom as an effective learning platform.	212	53.0	59	14.75	129	32.25

The data presented in Table 6 reveal that students have a positive acceptance level of Google Classroom as a learning platform, especially in terms of intending to continue using it, willingness to recommend it to other people, and useful in learning activities. The results indicate that students' preference for Google Classroom is moderate but they have a significant awareness of its educational value and are willing to use it as a tool in their learning process.

When asked if they would continue to use Google Classroom when face-to-face classes are offered, a large share of the respondents answered 'Yes' (75.75%) and when asked if they plan to use Google Classroom for their studies, 71.75% responded 'Yes'. In addition, 73.5% said that they would recommend using Google Classroom to other students. These results indicate a high behavioural intention towards continued use of the platform as students have gained confidence that it can help them learn. Students' acceptance of the platform, as evidenced by their willingness to continue using it and to recommend it to other students, indicates a high level of technology acceptance and that students do not only view Google Classroom as a tool for last-minute or supplementary learning, but rather as a piece of their educational lives.

The results also show that 61.0% agreed that Google Classroom was useful in their academic activities, with 57.0% wanting more courses to be conducted on Google Classroom. This suggests that the students are aware of the platform's learning capabilities, access to learning resources and supporting organisation of learning tasks.

The positive attitude towards its usefulness indicates that students view Google Classroom as a valuable tool for their education and would appreciate its greater incorporation into university education.

But students' preference for Google Classroom over other learning platforms was less pronounced. While 54.0% said that they like Google Classroom better than other platforms, 25.5% said otherwise and 20.5% were undecided. Likewise, 53.0% said that they overall accept Google Classroom as an effective learning platform, whereas 32.25% disagreed. The results indicate that the general attitude towards acceptance is positive, but students might think that other LMSs provide more features or better user experience. The relatively high percentages of disagreement and uncertainty suggest individual experiences and expectations related to digital learning technologies affect acceptance.

The general trend of results indicates that students' ongoing use of Google Classroom is more for educational value than for personal preference. Students seem to be happy to use and adapt to the platform as it helps them with their learning process, even though they may not consider it the best LMS yet. This shows that perceived educational value can be greater than comparative preference in determining students' intentions to continue using educational technologies.

The results of this study are in line with the Unified Theory of Acceptance and Use of Technology (UTAUT). The construct of performance expectancy – the degree of confidence users have that the technology will enhance their performance – is reflected by the findings that 61.0% of the respondents judged Google Classroom useful for their academic activities. If students think the platform improves their learning process and improves their study, they are more likely to accept and use it.

The results also strengthen the UTAUT construct of BI to use, which is considered by itself as the biggest predictor of actual technology use. The high percentages of respondents planning to continue using Google Classroom (71.75%), suggesting that respondents intend to keep using Google Classroom, and are willing to recommend it to others (73.5%), and use it when face-to-face classes are available (75.75%) reflect a high level of intent to continue using Google Classroom. The results indicate a shift from first exposure to the platform to its becoming a preferred learning style for students.

Further, students' recommendations to peers might be explained as support for the UTAUT construct of social influence that suggests that people are more likely to engage in a technology when they believe that others value or endorse its use. The high recommendation rate suggests that students are likely to help others accept/recommend the platform for academic purposes and to help the platform diffuse to other colleges within the institution.

The present study did not directly assess effort expectancy, however, the overall positive acceptance scores and the desire to continue using Google Classroom imply that students do not see Google Classroom as too complex to use. If users found there to be significant complexity and/or usability issues, there would be significantly fewer intentions to continue use. The results, therefore, indirectly indicate that the platform offers a satisfactory level of usability and maintains engagement.

The overall results show that students have a positive attitude towards the use of Google Classroom, with the aspects of helpfulness, future usage and recommending to peers receiving the highest ratings. The overall level of preference is relatively moderate, which suggests some opportunities to further enhance students' experience by better interaction, collaboration, and user engagement. However, the results strongly validate the Unified Theory of Acceptance and Use of Technology (UTAUT) since students' perceptions of the usefulness of the platform, their high behavioural intent and positive comment from their colleagues significantly influence their acceptance and ongoing use of Google Classroom in higher education.

CONCLUSION

The study determined the environmental and institutional factors that affect the adoption of Google Classroom by students in Obafemi Awolowo University, Ile-Ife, Nigeria. The results indicate that students in general have positive perceptions and generally accept Google Classroom in spite of the fact that there are several pedagogical and infrastructural challenges.

The study found school environment and institutional factors have a significant effect on the use of Google Classroom by students. Familiarity with Google accounts, access to electricity, low internet cost, and functionality with other gadgets were revealed as crucial enabling factors for the platforms. Despite its potential, several challenges hinder the effective use of this platform, including high data charges, poor communication, limited use of multimedia and the platform's inability to adequately support practical learning activities. These results validate the UTAUT statement that facilitating conditions are key factors in the adoption and continued use of technology.

The results also showed that overall, students felt that Google Classroom was a fairly effective platform for teaching, organizing learning activities, communicating, providing feedback, collaborative learning, and accessing learning materials. However, there was some doubt about its effectiveness in enhancing the quality of teaching and the ability to track students' learning progress, indicating that technology is not a standalone solution to improving the quality of education, it requires the proper pedagogical practices and lecturer skills.

As to learning experiences, the study indicated that Google Classroom provides blended learning, fosters independent learning, allows digital literacy, facilitates access to learning materials, and boosts learner engagement. Students were less confident that the platform directly affects academic performance, suggesting that academic success is related to the platform and its design but also to learner motivation and the quality of learning that is achieved.

The research also revealed that students have a positive attitude towards the use of Google Classroom. The high percentages indicated plans to keep using the platform, suggesting that the students perceived it to be very useful for academic tasks. Overall, the preference for Google Classroom over other learning platforms was moderate, but there was greater interest in staying on the platform than in platform preference, suggesting that the students' interest in the platform is associated with its perceived educational benefit. The results confirmed the Unified Theory of Acceptance and Use of Technology in terms of the constructs of performance expectancy, facilitating conditions, behavioural intention, and social influence that were found to be strongly related to students' acceptance and continued use of Google Classroom.

In general, the study suggests that Google Classroom has a good potential to facilitate technology-enhanced teaching and learning in Higher Education institutions. But if it is to be a most effective tool, digital infrastructure as well as the skills of lecturers, pedagogic interaction, and institutional support systems need to be improved to enhance students' learning experiences and to make the technology more enduring.

IMPLICATIONS FOR LEARNERS

This study's findings have implications for learners in Higher Education Institutions. First, the positive perceptions of Google Classroom's flexibility and accessibility indicate a need to further encourage students to use digital learning platforms as supplementary tools to support independent and lifelong learning. The platform provides students the opportunity to review the teaching content, freely access the academic resources, and self-manage their learning procedure more.

Second, the study shows that students should have more effective digital literacy and self-regulated learning capacities in order to optimise learning outcomes from Google Classroom. The platform requires students to learn on their own, and to engage in continuous learning, those students who are able to manage their time, information and digital skills are more likely to get positive learning outcomes.

Third, many students also do not view Google Classroom as a direct improvement in their academic performance, suggesting that students should learn to view technology as an enabler, not a replacement for good study routines, participation and critical thinking. In addition to digital platforms, meaningful activities with learning materials, participation in group work and regular interactions with the lecturer are essential for academic success.

Moreover, the influence of the economy of the internet and the electricity supply emphasizes the disparities in learning opportunities among students who do not have the same resources. Recognizing that equitable access

to digital infrastructure is key to inclusive access to technology-enhanced learning and to minimizing educational gaps between students then, institutions and policymakers should acknowledge the need for equitable access to digital infrastructure.

The results also indicated that students can be important agents of change in the adoption of technology with a good amount of peer influence. Positive experiences with Google Classroom could inspire students to share their experiences with their peers and help establish effective collaborative learning communities and foster broader institutional adoption of education technologies.

Finally, the overall moderate acceptance of Google Classroom suggests that students are expecting digital learning systems to supply content delivery as well as significant interaction and collaboration, prompt feedback, and exciting learning experiences. It is recommended, therefore, that students use tools and features that are available in a collaborative way and give constructive feedback so that institutions can improve the digital learning environment.

RECOMMENDATIONS

This study makes the following recommendations:

1. Higher Education Institutions should improve internet connectivity, increase the availability of Wi-Fi in the campus and ensure reliable electricity connectivity to improve students' access to digital learning platforms such as Google Classroom.
2. Universities should establish policies to decrease the amount of Internet data students are responsible for paying for, such as working with telecommunications companies to provide discounted educational Internet data plans, or free access to learning management systems.
3. Continuous professional development programmes should be planned for the lecturers to enhance the pedagogical incorporation of Google Classroom, including learning through collaboration, formative assessment, provision of timely feedback, interactive teaching, and the use of multimedia resources.
4. Blended learning approaches that incorporate elements of face-to-face learning and Google Classroom should be used when designing courses and teaching with the goal of optimizing course flexibility while providing opportunities for hands-on, meaningful, and engaging learning.
5. Institutions should promote use of collaborative tools and features in Google Classroom, such as discussion forums, group assignments, peer assessment, and shared learning resources, to further foster interactions and engagement among students.
6. Digital literacy training needs to be integrated in student induction programme to enhance the technical and SRL skills of the students for their effective participation in technology enhanced learning environment.
7. Google Classroom should be complemented by specialized digital tools and simulation technologies that can also be used for supporting practical demonstrations, virtual laboratories and experiential learning activities in courses that are practical or laboratory-based.
8. University management should create educational technology support units that provide technical help, user support and regular checking and monitoring of learning management systems for their efficient implementation and sustainability.
9. Through the use of Google Classroom, lecturers should not only provide content but also adopt a variety of active learning strategies such as collaborative projects, reflective discussion, problem-based learning, and ongoing formative assessment and enhance students' perception of the role of the use of Google classroom in their academic performance.
10. Further studies are recommended to explore other variables associated with students' acceptance of LMS, such as digital competence, self-efficacy, learning styles, and lecturers’ characteristics, as well as the application of longitudinal and mixed-methods research to gain a better understanding of technology adoption in higher education.

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