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Undergraduates Perception Towards The Use of Google Classroom for Learning

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ABSTRACT

Google Classroom allows teachers to spend more time with their students and less time on the paperwork, and it is now even better. This study assessed the Undergraduates' Perceived Ease of Use and perceived usefulness of Google Classroom for Learning and the influence of gender on their perception. This research was a descriptive research method of the survey type. The population of this study was all undergraduates in Kwara state. Students were randomly selected from each of the faculties listed to bring the total number of samples to 400. Percentage, mean, and t-test were used for the analysis. The findings established that Undergraduates have a positive perception of the ease of use of Google Classroom for learning with a grand mean score of 3.50; Undergraduates have a positive perception of the usefulness of Google Classroom for learning with a grand mean score of 3.39; There was no significant difference between male and female Undergraduate Students Perceived the Ease of Use of Google Classroom for Learning and There was no significant difference between male and female Undergraduate Students' Perceived Usefulness of Google Classroom for Learning. The study concluded that undergraduates have a positive perception of the ease of use and usefulness of Google Classroom for learning. This implies that if Google Classroom is adopted in our schools, there will be a tremendous improvement in the academic performance of undergraduates irrespective of their gender and specializations. It was however recommended that the educational authorities and the school system should encourage the use of Google Classroom for learning.

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1. INTRODUCTION

The concept of Education has undergone a major shift, in recent times, from teacher-centric to learner or learning-centric. Earlier, teachers played the role of knowledge providers, but now their role has expanded. There is a lot of emphasis on integrating technology in the classroom through innovative teaching strategies that focus on enabling students to achieve the desired learning objectives (Hwang *et al.*, 2015). Technology facilitates student engagement in learning (Northey *et al.*, 2015). Technology has impacted most sectors, including the education field. Many schools have incorporated technology through the utilization of Information and Communication Technologies (ICT) into learning. The use of platforms such as Google Classroom is one of the ways to fit the best classroom practice.

Educational technologies are often incorporated into a classroom setting to allow learning to be personalized and independent for the students. Advocates and critics of using educational technologies have found a middle ground through Blended (or hybrid) learning. The terms blended learning, mixed-mode learning, and hybrid learning are used interchangeably. Blended learning allows a smooth transition from a shift in teaching methodology, for teachers and learners. It is important that the goal should not be just to integrate technology in the classroom; instead, pedagogical objectives should determine the different modes of teaching instructions.

Teachers can now use many Educational Technologies, along with the traditional classroom setup, to enhance the learning environment for the students. In 2014, Google Apps for Education (GAFE) launched Google Classroom. The application is free to use for teachers and students which makes it an ideal fit for developing countries, where the budgets are limited. It can act as a learning management system in schools, colleges, and higher education institutes. Teachers can effectively utilize classroom time using Google Classroom.

Google Apps for Education is a suite of cloud-based applications that Google provides free to educational institutions. Unlike traditional computer programs which must be installed on the user's computer, cloud-based applications are available to users from any Internet-connected computer using a browser. Because the software and data exist on the web, cloud-based programs can run seamlessly from a wide variety of computers and mobile devices. The Google Apps for Education cloud-based suite includes e-mail, a calendar, website creation software, and a set of office applications for word processing, spreadsheets, drawings, slideshows, and surveys. The online workspace also can function as a file locker, where a variety of documents can be uploaded for storage and sharing. Since these applications and the associated work files reside in the cloud, we had access to our work from any Internet-connected computer, providing maximum flexibility to our team.

Google Classroom takes the web-based applications, namely the Google Apps for Education, one step further for education by compiling them into one virtual, interactive platform designed for students as an online classroom. Iftakhar (2016) stated Google Classroom is meant to help teachers manage the creation and collection of student assignments in a paperless environment, basically leveraging the framework of Google Docs, Drive, and other apps. Google Classroom allows teachers to spend more time with their students and less time on the paperwork, and it is now even better (Iftakhar, 2016).

Ramdhani (2009) stated that the perception of the benefits of using ICTs also affects the perceived ease of using ICT and not vice-versa. Espinosa *et al.* (2017) researched to evaluate the functionality of Google Classroom as a Learning Management System (LMS). The study found that cost was the primary reason for the adoption. Collaborative learning through assignments was viewed as an extremely effective tool for enhancing student engagement.

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Enoch and Soker (2016) found male college students are more comfortable with online course components. Further, gender differences may exist in certain disciplines regardless of the technologies used. For example, female students often perform worse than their male counterparts in the STEM (science, technology, engineering, and math) disciplines. Studied students' performance on exams. They found that active participation in the clicker response questioning often led to better performance, and the effect was stronger for male students. They also found that female students used clickers more actively. On the contrary, Morgan (2018) found the use of clickers neither improved the grade distribution nor lowered the attrition rate (i.e., the percentage of students who dropped the course). The grades of the classes using clickers were worse than those of the classes not using clickers even though the difference was not statistically significant.

Technology has gained importance in all stages of education yet educators have been unable to figure out which of the many available technological tools best fit their classroom practices (Kumar & Bervell, 2019). The need to maintain continuous transmission of knowledge and education has been identified and encouraged by educational experts. Google Classroom is one such tool that is free of cost and has gained popularity within a short period. To increase classroom effectiveness, teachers aim to enhance student engagement by making the student experience more independent and personalized, a growing number of schools, colleges, and higher education institutes are in the phase of adoption of blended learning in developing countries (Spring *et al*., 2016). Google Classroom can be used as a blended learning tool to elevate classroom productivity.

Appropriately using technology is one of the biggest challenges for the teachers to manage in a blended learning environment; therefore, this study is focused on assessing the effectiveness of Google Classroom in higher education classes. Undergraduate students held a positive perception regarding the use of Google Classroom. The role of teachers in the adoption of any new learning methodology should not be ignored as they are the central figure in the transformation of educational practices. Schools across the nation have spent billions on purchasing and implementing technology as a means to improve student learning and student technology skills (Anthony, 2012). In addition to the claims that computers can increase achievement for students in school, some researchers proposed that utilizing technology in classrooms better prepares students for a technology-rich society after their secondary education (Ismail, 2015).

Moreover, despite professional developments created to alleviate some of the worries among teachers who find themselves as the sole facilitator of a technology-based classroom, many teachers amid a one-to-one technology program still report pressures and barriers to successful integration (Anthony, 2012). Technology has gained importance in all stages of education yet educators have been unable to figure out which of the many available technological tools best fit their classroom practices. Google Classroom is one such tool that is free of cost and has gained popularity within a short period.

The main purpose of this study was to evaluate the undergraduate perception of the uses of Google Classroom in Kwara State, Nigeria. Specifically, the study was focused on

(i) Assessing the undergraduates' perceived ease of use of Google Classroom for learning.
(ii) Investigating the undergraduates' perceived usefulness of Google Classroom for learning.
(iii) Investigating the influence of undergraduates' gender on perceived ease of use of Google Classroom for learning.
(iv) Determining the influence of undergraduates' gender on the perceived usefulness of Google Classroom for learning.

Research Questions

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The following Research questions were answered in this study:

(i) How do undergraduates perceive the ease of use of Google Classroom for learning?
(ii) What is undergraduates' perceived usefulness of Google Classroom for learning?
(iii) Does undergraduates' gender influence their perceived ease of use of Google Classroom for learning?
(iv) What is the influence of undergraduates' gender on the perceived usefulness of Google Classroom for learning?

The following hypotheses were tested in this study

(i) $\mathbf{H_{O1}}$: There is no significant difference between male and female Undergraduates' Perceived the Ease of Use of Google Classroom for Learning
(ii) $\mathbf{H_{O2}}$: There is no significant difference between male and female Undergraduates' Perceived Usefulness of Google Classroom for Learning.

2. METHODS

This chapter presented the method and procedures that were used in this study to gather and analyze the data that will be collected this study. It was presented under the following subheadings; Research design, population, sample and sampling techniques, validation of research instrument, the procedure for data collection, and data analysis techniques.

2.1. Research Design

This research was a descriptive research method of the survey type. The survey is chosen for this study because it enables the researcher to collect large amounts of information about the perceived ease of use, and perceived usefulness of undergraduates towards the use of Google Classroom for learning in Kwara state.

2.2. Population, Sample, and Sampling Techniques

The population of this study was all undergraduates in Kwara state. The target population comprised students in the Faculty of Education, Faculty of Agriculture, Faculty of Social Science, Faculty of Management Science, and Faculty of Communication and Information Science. Students were randomly selected from each of the faculties listed to bring the total number of samples to 400.

2.3. Research Instrument

The instrument was a questionnaire that was divided into three sections. The instrument consists of three (3) sections, A, B, C, D, and E. Section A of the instrument was used to elicit demographic characteristics of the respondents such as gender and faculty. Section B comprised 10 items on the perceived ease of use of Google Classroom for respondents to choose maybe their corresponding response mode on each item. The response mode of strongly agree, agree, disagree, and strongly disagree would be used for this section. Section C comprised 10 items on the perceived usefulness of the use of Google Classroom for respondents to choose their corresponding response mode on each item. The response mode of strongly agree, agree, disagree, and strongly disagree was used for this section.

2.4. Validation of the Research Instrument

To ensure the face and content validity of the questionnaire that was used in this study, the researcher's supervisor and two other lecturers, who are lecturers from the Educational Technology Department, University of Ilorin vetted the instrument. Their advice, comments,

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and suggestions were used to modify the items in the instrument and also prepare the final draft. In other to test the reliability of the research instrument, the research instrument was pilot tested on 20 students of Ladoke Akintola University students, their data will then be subjected to the Cronbach alpha statistical tool. The result was 0.69 for perceived ease of use, and 0.73 for perceived' usefulness. The result obtained ascertained that the standard of the research instrument is good, this implies that the instrument was reliable.

2.5. Procedure for Data Collection

The researcher obtained a letter of introduction which was taken to the Deans of each faculty to be sampled for permission. Thereafter, the copies of the questionnaire were distributed to the students in the target location. The researcher collected back the copies of the questionnaire after the sample has responded to the items in the questionnaire and collated the data for analysis. In other to consider ethical issues, no students were coerced to fill out the questionnaire and their data were kept confidential as none will be used for any other purpose different from the research purposes which it was designed for.

2.6. Data Analysis Techniques

The researcher obtained a letter of introduction which was taken to the Deans of each faculty to be sampled for permission. Thereafter, the copies of the questionnaire were distributed to the students in the target location. The researcher collected back the copies of the questionnaire after the sample has responded to the items in the questionnaire and collated the data for analysis. In other to consider ethical issues, no students were coerced to fill out the questionnaire and their data were kept confidential as none will be used for any other purpose different from the research purposes which it was designed for.

3. RESULTS

This chapter presents the analysis and results obtained from the data gathered based on research questions stated in the study. The data presented provide a summary of the major characteristics of the respondents that were involved in the study. A total of 420 copies of questionnaires were distributed but 400 were retrieved, properly filled, and rendered valid amounting to a 95.3% return rate. This was thus used for the analysis.

3.1. Demographic Information

Table 1 shows the demographic distribution by gender. We compared gender in this case. The results showed that female respondents were more than their male counterparts. Detailed data is shown in **Figure 1**.

Table 1. Demographic distribution by gender.

Gender	Frequency	Percent	Cumulative Percent
Male	178	44.3	44.3
Female	222	55.7	100.0
Total	400	100.0	

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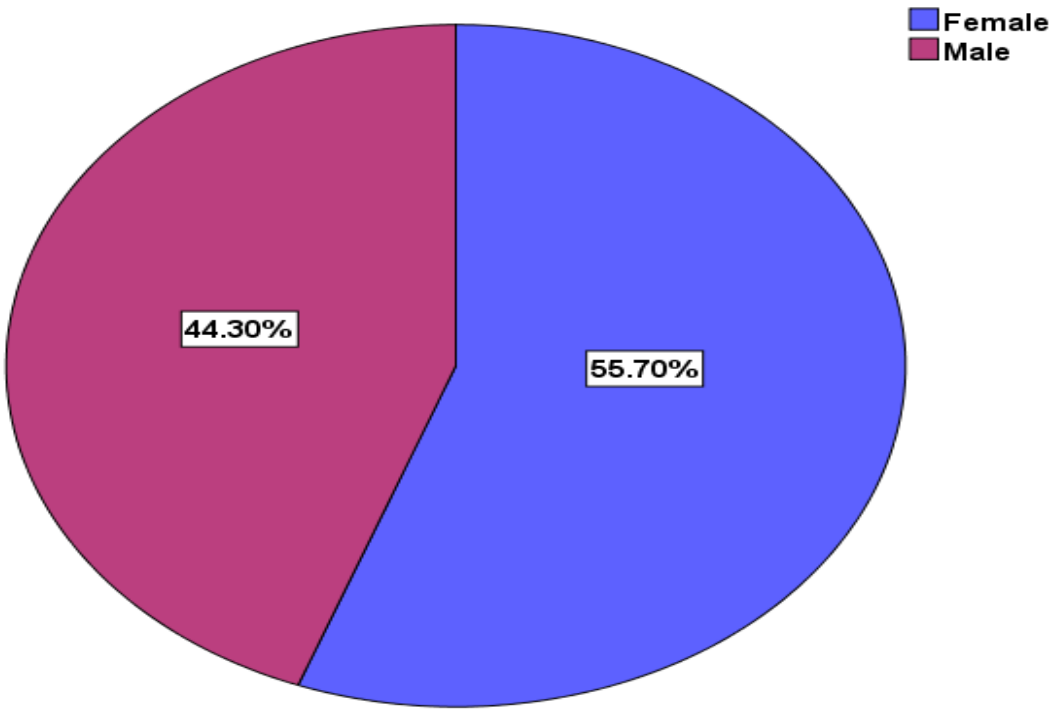

Figure 1. Pie chart of respondents' gender.

3.2. Research Question One: How do Undergraduates Perceive the Ease of Use of Google Classroom for Learning?

The perception of undergraduates on the ease of utilization of Google Classroom for learning was examined and the results are presented in **Table 2**. The mean on each of the items was presented across its statement as shown in Table 2. The grand mean score was 3.50 which was greater than the benchmark of 2.50 (since it was a 4 Likert scale response mode). Thus, it can be established that undergraduates have a positive perception of the ease of use of Google Classroom for learning.

Table 2. Students' Perception of the ease of use of Google Classroom for learning.

S/N	Items on Perceived Ease of Use	Mean	SD
1	It is easy to become skillful using Google Classroom for learning	3.43	0.50
2	I find it easy to apply the Google Classroom in my class	3.42	0.64
3	Using Google Classroom will be easy and understandable for teaching physics practical	3.49	0.50
4	Using Google Classroom will be more flexible to teach than the traditional method for physic practical	3.47	0.58
5	Google Classroom is easy to use for learning practical subjects	3.57	0.47
6	I find learning easy with Google Classroom.	3.55	0.55
7	It is easy to interact with my colleagues when learning with Google Classroom.	3.55	0.50
8	I need knowledge of computers to use Google Classroom.	3.50	0.58
9	I often get confused when learning with Google Classroom.	3.51	0.50
10	I often get distracted when learning with Google Classroom.	3.49	0.55
	Grand Mean	**3.50**	

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3.3. Research Question Two: What is Undergraduate 's Perceived Usefulness of Google Classroom for Learning?

The perceived usefulness of undergraduates toward the use of Google Classroom for learning was examined and the results are presented in **Table 3**. The mean on each of the items was presented across its statement as shown in **Table 3**. The grand mean score was 3.39 which was greater than the benchmark of 2.50 (since it was a 4 Likert scale response mode). Thus, it can be established that the undergraduates have a positive perception of the usefulness of Google Classroom for learning.

Table 3. Students' perception of the usefulness of google classroom for learning.

S/No	Items on Perceived Usefulness	Mean	SD
1	Google Classroom helps me to be more effective.	3.37	0.48
2	Google Classroom helps me be more productive.	3.39	0.49
3	Google Classroom is useful for learning.	3.37	0.48
4	Google Classroom gives me more control over the activities.	3.94	0.70
5	Google Classroom saves me time when I use it.	3.40	0.49
6	Google Classroom meets my needs.	3.01	0.38
7	Google Classroom does everything I would expect it to do.	3.26	0.56
6	Google Classroom is useful for practical's classes	2.98	0.77
7	Using the Google Classroom in my class will enhance my performance	3.66	0.58
8	Using the Google Classroom gives me access to a lot of learning materials	3.30	0.66
9	Using Google Classroom is useful for self-explanation of practical lessons	3.22	0.54
10	Using Google Classroom makes it easier to catch individual students' needs	3.78	0.69
	Grand Mean	**3.39**	

3.4. Hypothesis One : There is no Significant Difference Between Male and Female Undergraduates' Perceived Ease of use of Google Classroom for Learning

In other to investigate whether there was a significant difference between male and female undergraduates perceive ease of use of Google Classroom, a t-test was used to test the hypothesis at a 0.05 significant level.

Table 4 indicates that t (198) = -.02, p = 0.79. This means that the stated null hypothesis was accepted. This was a result of the t-value of .02 resulting in a 0.79 significance value which was greater than the 0.05 alpha value. It was deduced that there was no significant difference between male and female undergraduates' perceived' ease of use of Google Classroom for learning.

Table 4. *t*-test on the significant difference between male and female undergraduates' perceived ease of use of google classroom for learning.

S/N	Gender	N	Mean	Std. Dev.	Df	*T*	Sig. (2tailed)	Remarks
1.	Male	178	3.47	0.07				
					198	-0.02	0.79	Accepted
2.	Female	222	3.53	0.08				
	Total	400						

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3.5. Hypothesis Two : There is no Significant Difference Between Male and Female Undergraduates' Perceived Usefulness of Google Classroom for Learning

In other to investigate whether there was a significant difference between male and female undergraduates ' perceived usefulness of Google Classroom , a t-test was used to test the hypothesis at a 0.05 significant level.

Table 5 indicates that t (198) = -0.36, p = 0.72. This means that the stated null hypothesis was accepted. This was a result of the t-value of .36 resulting in a 0.99 significance value which was greater than the 0.05 alpha value. It was deduced that there was no significant difference between male and female undergraduates' perceived usefulness of Google Classroom.

Table 5. *t*-test on the significant difference between male and female undergraduates' perceived usefulness of Google Classroom.

S/N	Gender	N	Mean	Std. Dev.	Df	*T*	Sig. (2tailed)	Remarks
1.	Male	178	3.30	0.06				
					198	-0.36	0.72	Accepted
2.	Female	222	3.48	0.05				
	Total	400						

4. DISCUSSION

The finding of research question one showed that Undergraduates have a positive perception of the ease of use of Google Classroom for learning. This is in support of Northey *et al.* (2015) who established that technology facilitates student engagement in learning. Technology has impacted most sectors, including the education field. Many schools have incorporated technology through the utilization of Information and Communication Technologies (ICT) into learning.

Undergraduates have a positive perception of the usefulness of Google Classroom for learning. This corroborates Davis (Ramdhani, 2009) stated that the perception of the benefits of using ICTs also affects the perceived ease of using ICT and not vice-versa. Some of the teachers interviewed expressed concerns about off-task behavior, while others mentioned the environment of a one-to-one classroom is quieter and less disruptive (Storz & Hoffman, 2013).

There was no significant difference between male and female undergraduate students' perceived ease of use of google classroom for learning. This support the findings of Enoch and Soker (2016) found male college students are more comfortable with online course components. There was no significant difference between male and female Undergraduate Students' Perceived Usefulness of Google Classroom for Learning. Google Classroom is easy to use and it is relaxed the learning atmosphere. It means that the relaxed atmosphere given during using Google Classroom makes the students get positive feelings and emotions.

It was found that Google Classroom can be used to solve the traditional learning system problems. Both teachers and students need a proper and handy system to interact with each other and facilitate the teaching system. The Google Classroom is not to replace traditional classrooms but it can be used to complement the learning process in our schools and universities.

5. CONCLUSION

This study has revealed that undergraduates have a positive perception of the ease of use and usefulness of Google Classroom for learning. There was no significant difference between

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male and female Undergraduate perceptions of the use of Google Classroom for Learning. Thus the perception of students toward the ease of use as well as the usefulness of Google Classroom will aggravate students' readiness to use such learning technologies.

Based on the findings and conclusion of the study the following recommendations were hereby made:

(i) The educational authorities and the school system should encourage the use of Google Classroom for learning.
(ii) There is an urgent need for government and state holders to provide mobile technologies in the schools to facilitate the teaching and learning process with Google Classroom.
(iii) All stakeholders in the education sector should endorse quick and effective settings for easy access to Google Classroom for learning.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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