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Analysis of google classroom utilization as a tool to enhance blended learning in federal polytechnic Mubi Amidst Intense Security and COVID-19 Challenges

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Abstract

Teaching and learning have improved in the twenty-first century as numerous pedagogical technologies have been produced to support learning throughout the universe, where traditional classrooms have been turned into virtual classrooms to facilitate blended learning. The Nigerian education system has suffered a setback as a result of the COVID-19 pandemic and the country's strong insecurity concerns, both of which have had a significant impact on the country's education system, making it harder for students and teachers to collaborate in learning. This paper aimed to analyze the utilization of Google Classroom as a tool for teaching and learning in the Federal polytechnic Mubi. The study used a total of 475 questionnaires to collect data from Lecturers of the institution, and a simple percentage was used to analyze the results. Our findings revealed that 55% of the respondents believed that Google Classroom made it easy to upload course materials to students, 65% also believed that Google Classroom made it easy to grade students' assignments/quizzes, and 61% likewise attested that Google Classroom was of great significance in timely completion of course delivery and assessment. Therefore, this paper concluded that Google Classroom was utilized in the Federal Polytechnic Mubi amidst insecurity and COVID-19 challenges. The paper recommends the adoption of Google Classroom as a tool to enhance blended learning in Nigerian tertiary institutions.

Keywords: Google classroom; Technological tools; Teaching and learning; Blended learning; COVID-19 and Insecurity challenges

1. Introduction

In the 21st century, teaching and learning have advanced from traditional classrooms to virtual classrooms due to advancements in technology and various innovations in pedagogy. This is possible due to the inventions of internet-enabled devices such as computers and mobile devices which offer new prospects for teaching and learning beyond the traditional classrooms in tertiary institutions.

Thus, Seamless learning connects private and public learning areas, allowing students to learn through both individual and group efforts, as well as across time and situations (such as in school vs after-school, formal vs informal learning, physical world vs. virtual reality or cyberspace). Formal learning is often described as learning that occurs at a set time and follows a predetermined curriculum or plan. Informal learning, on the other hand, refers to learning that takes place outside of the classroom and is emergent [1].

Similarly, research by [2] revealed that asynchronous communication seemed to enable in-depth communication among learners with previous training in computers who were more satisfied with online courses than students who hardly used the computers. Agustina and Purnawarman [3] further reported an analysis proposed by the US Department of

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Education which revealed that online instruction can be more valuable than traditional face-to-face instruction for both younger and older learners.

According to [4], teaching and learning through the use of modern techniques such as Flipped Learning, Case-Based Learning, Problem-Based Learning, and Project-Oriented Learning encourages participation and also moves the responsibility of learning to the student because it depends directly on the development of personalized activities. According to [5], flipped learning enables a student to be self-dependence and work independently to get efficient results. Similarly, the involvement and commitment of students are more formative than informative. This form of learning generates deeper, meaningful, and lasting learning and simplifies the knowledge transfer and work contexts experiences. Similarly, [6] revealed that as classrooms are becoming more and more paperless with the latest technologies, teachers have started finding alternative solutions to handout, assignments, manage their classroom, and communicate with students through the use of Google Classroom.

In Nigeria, the education sector is experiencing a setback due to the Covid-19 pandemic and the intense insecurity challenges that have invaded the sector, where bandits/kidnappers have made it difficult for students and teachers to feel safe in their various institutions of learning.

Though, blended learning is taking over the educational sector, especially tertiary education, where various educators employed blended teaching for successful learning environments to impart the best learning methods and models for expanding the knowledge of the learners [7]. It enables students to learn at their own pace with ease without inconvenient themselves or the lecturer then any area that is not clear enough will be discussed in class [8]. The flexibility of blended learning is what made it a widely accepted mode of teaching and learning among modern educators and universities [9].

Blended learning inculcated an interest in learning through attractive lessons, improved communication, and developed social networking, it also supported autonomous learning [10]. Blended learning motivates an environment for student-centric learning [9].

A survey was conducted by [11] on the integration of technological tools for effecting blended learning with a focus on Google Classroom integration during COVID-19 pandemic. The work used quantitative and qualitative methodologies combined with numerical measurement and in-depth exploration to survey first-year students of B. Tech, Department of Information Technology, Vishnu Institute of Technology, India. The results indicated that Google Classroom was the primary tool used by the school, both the students and teachers were comfortable with the use of Google Classroom for blended learning and assessment.

Agustina and Purnawarman [3] investigated learners' satisfaction utilizing Google Classroom as an online formative feedback tool. The paper contributed to further technology development for pedagogy life, especially formative feedback. This can also give the developer the opportunity for ICT-based integration for education. The authors used a quantitative research design and a total number of 43 respondents participated by responding to the questionnaires distributed via Google Forms, also students' interviews as quantitative data. The result of the experiment indicated that the respondents of the study were well satisfied with google classroom usage for online learning, academic-related activities, and formative assessment.

Before the Covid-19 pandemic, Google Classroom was already a prevalent digital learning tool earlier than the year 2020, though the pandemic has made it even more popular. Google Classroom is a free teaching and learning platform with active users count to more than 100 million students and educators around the world [12].

The Google Classroom offers students a lively online learning environment, teachers can equally use the platform to share announcements, ask questions, post assignments, conduct online assessments, and organize essays and grade papers. Google Classroom is cloud-based; therefore, it is accessible anywhere and anytime from any device with an internet connection. The Google Classroom can be used to create classes, add students, manage classwork, and grade students' work [6]. TrustRadius Research Team [13] presented some benefits of using Google Classroom over other online learning platforms (e.g. Canvas): i) in terms of cost and usefulness, Google Classroom is a free tool for schools and is also part of the G-Suite for Education package, ii) its simplicity makes it suitable for students in remote places to work independently, iii) Google Classroom is user friendly than canvas which makes it a perfect choice for its users.

This study seeks to analyze the utilization of Google Classroom as a tool to enhance blended learning in Federal Polytechnic Mubi admits insecurity and COVID-19 challenges.

2. Material and methods

2.1. Study Area for the Research

The study was carried out at the Federal Polytechnic Mubi, Adamawa State Nigeria. The region lies between latitude 10.260381, and longitude 13.260576. Mubi is a city located in Nigeria with GPS coordinates of 10° 15' 37.3716'' N & 13° 15' 38.0736'' E, it is the second-largest city in Adamawa State with four tertiary institutions.

2.2. Method of data collection and analysis

The study employed the use of a questionnaire to collect data from the Lecturers of the institution. A total of 550 questionnaires were distributed to analyze the utilization of Google Classroom for E-learning in Federal Polytechnic, Mubi amidst intense insecurity and the COVID-19 Challenges. On returning the questionnaires, a total of 475 were received from respondents and the analyses were presented based on the returned questionnaires using a simple percentage.

3. Results and discussion

Using the data collected from the 475 questionnaires received from respondents, the analyses were presented based on the returned questionnaires using a simple percentage. The responses from the questionnaires were analyzed below using pie charts.

- Whether uploading course contents and materials in Google Classroom is easy

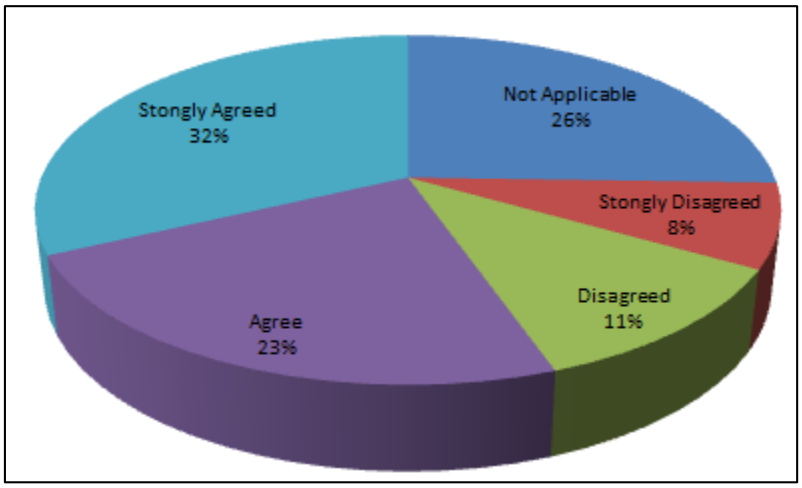

Figure 1 Uploading course contents and materials in Google Classroom is easy

Figure 1 portrayed that 55% of the respondents either agreed or strongly agreed that it is easy to upload course contents and materials in Google Classroom. Only 19% believe that uploading course contents and materials in Google Classroom is not easy. However, 26% are not sure if uploading course contents and materials is easy or not.

- Whether grading students' assignments, tests, and quizzes in Google Classroom is easy amidst COVID-19 challenges

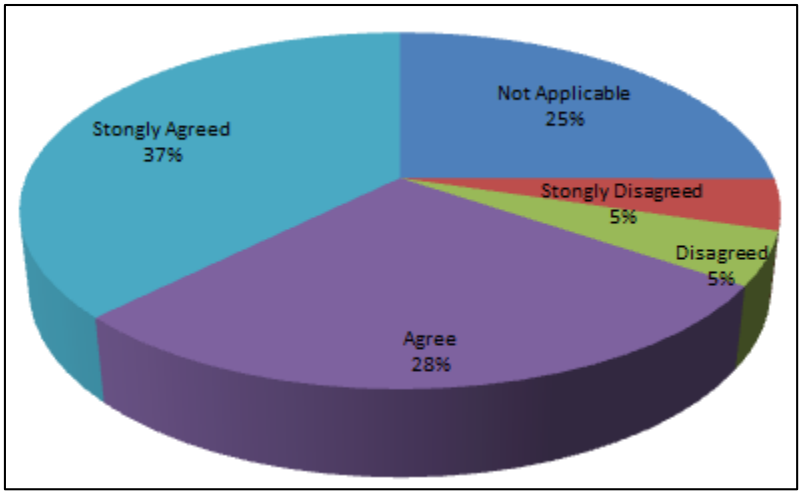

Figure 2 Grading of students' assignments, tests, and quizzes in Google Classroom is easy amidst COVID-19 challenges

As shown in Figure 2, 65% of the respondents have agreed or strongly agreed that grading students' assignments, tests, and quizzes in Google Classroom is easy while 10% either disagree or strongly disagreed with the assertion that amidst COVID-19 challenges, grading of students' assignment, test and quiz is easy, where 25% are not sure whether is easy or not.

- Whether interacting with students amidst COVID-19 challenges using Google Classroom is simple and convenient.

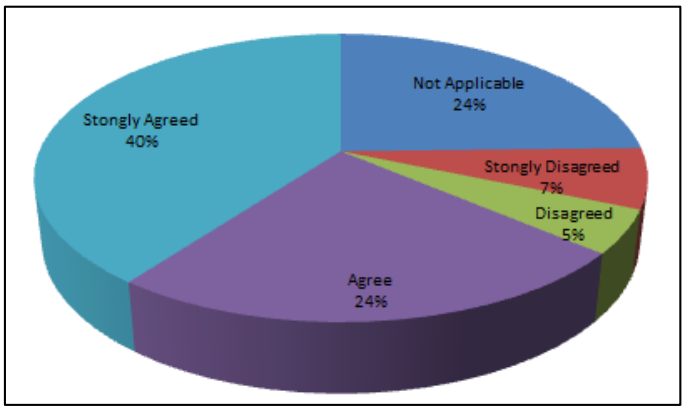

Figure 3 Interacting with students amidst COVID-19 challenges using Google Classroom is simple and convenient.

Figure 3 has clearly illustrated that 12% of the respondents either disagree or strongly disagree that interaction using Google Classroom is easy amidst COVID-19 challenges. 24% are not sure of students' interaction using Google Classroom. Only 64% agreed or strongly agreed that interaction in Google Classroom is simple and convenient for the students.

- Whether Google Classroom has helped me to complete my course assessment and lectures amidst COVID-19 challenges

As clearly shown in Figure 4, 61% have either agreed or strongly agreed that Google Classroom helped them to complete their course assessment and lectures timely amidst COVID-19 challenges. While 14% either disagreed or strongly disagreed that they could not complete their courses and assessment on time. 25% are not aware of Google Classroom to handle course assessments and lectures.

- Whether I would recommend other lecturers to use Google Classroom as an E-learning tool in their classes.

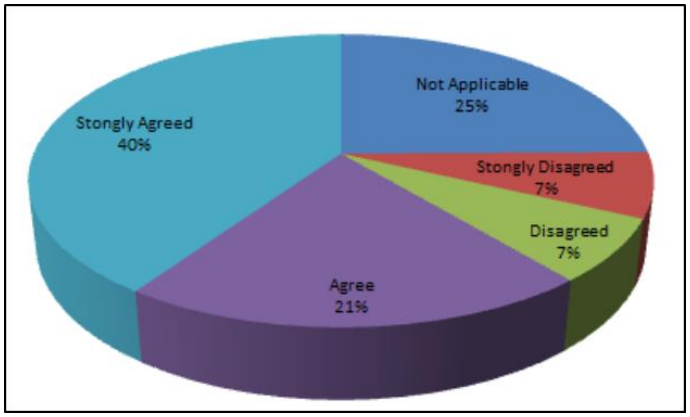

Figure 4 Google Classroom has helped me to complete my course assessment and lectures amidst COVID-19 challenges

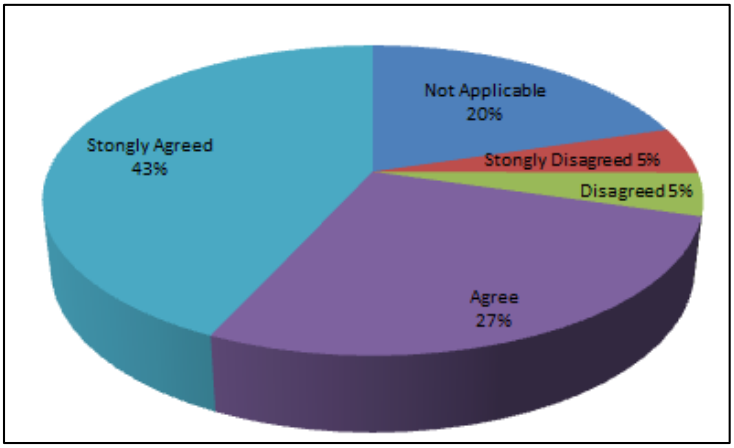

Figure 5 I would recommend other lecturers to use Google Classroom as an E-learning tool in their classes.

Figure 5 indicates that 70% of the respondents either agreed or strongly agreed with recommending the use of Google Classroom as an E-learning tool in teaching students. On the other hand, 10% disagreed with recommending Google Classroom as a tool for E-learning. 20% of the respondents are not sure if they should recommend Google Classroom as an E-learning tool.

It is therefore recommended the use of Google Classroom as an E-learning tool in teaching students.

4. Conclusion

This paper discussed the integration of technological tools to enhance teaching and learning in the Federal Polytechnic Mubi. The paper analyses the utilization of Google Classroom as a medium of teaching and learning in the institution amidst intense insecurity and COVID-19 challenges. The findings in this study revealed that most of the lecturers found it easy to upload course contents and materials in Google Classroom, also conducting and grading assignments/quiz is equally easy. The analysis also presented Google Classroom as a convenient tool to interact with students. Therefore, this paper concludes that Google Classroom has assisted most of the lecturers in the Federal Polytechnic Mubi with timely delivery of courses and students' assessments amidst Covid-19 challenges.

Recommendations

Based on the findings in this paper, it is recommended that Google Classroom should be accepted to improve teaching and learning in Nigerian higher institutions. In addition, Nigerian tertiary institutions should invest in the infrastructures needed to support blended learning.

Compliance with ethical standards

Acknowledgments

The authors acknowledged the efforts of the lecturers of the Federal Polytechnic Mubi for supplying the data required for this research.

Disclosure of conflict of interest

The authors declare that there is no conflict of interest as regards this paper.

Statement of informed consent

All the lecturers of the Federal Polytechnic Mubi who responded to the questionnaires voluntarily supplied the data that led to the success of this research.

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