



GOOGLE CLASSROOM FOR TEACHING IN OBAFEMI AWOLOWO UNIVERSITY DURING COVID-19: IMPLICATIONS FOR ADULT LEARNING IN A POST-PANDEMIC ERA

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Abstract:

The COVID-19 pandemic accelerated the application of digital learning platforms in higher education, and Google Classroom emerged as one of the main tools for teaching and learning continuity. This study evaluated the extent of lecturers' perceptions of Google Classroom in teaching at Obafemi Awolowo University. A descriptive survey design was used, and data were collected through a structured questionnaire with 80 purposively selected lecturers. The data were analysed using frequency counts and percentages. Results indicated that lecturers viewed Google Classroom positively because it helped to promote more flexibility, accessibility, collaboration, feedback and organization of learning. Nevertheless, it was noted that there were limitations of its application, which include a lack of support for practical and technical learning, a limited breadth of integration, infrastructural limitations and fears about promoting higher-order thinking and complex assessment approaches. The study concluded that Google Classroom and its use are a good teaching tool; however, it is not necessarily revolutionary. The effectiveness is conditional on digital skills as well as institutional support or technological infrastructure. The study suggests upgrading instructor training, enhancing technology assistance, embedding more digital tools in education systems and encouraging low-cost access to digital learning resources.

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1. Introduction

The COVID-19 pandemic is the first time in history to disrupt education systems on such a massive scale, with schools and universities closed and over 1.2 billion learners impacted worldwide (UNESCO, 2020). In this regard, higher education institutions rapidly shifted to online learning from in-person to ensure academic activities. The abrupt change drove the rapid proliferation of digital learning environments – particularly learning management systems such as Google Classroom.

It is a web-based application designed to provide support for teaching – allowing lecturers to create, manage and deliver instruction and conduct communication and assessment. The integration with other digital tools also leads to efficient distribution of learning materials, efficient handling of assignments and timely feedback. The empirical evidence shows that Google Classroom enhances the organization of instruction and efficiency of teaching (Azhar & Iqbal, 2018). In the pandemic situation, it seemed to have been a popular choice as it was a practical solution in the context of remote learning.

Recent findings suggest that using Google Classroom is more focused on content delivery and administration rather than engaging and creative pedagogy approaches (Albashtawi & Al Bataineh, 2020). A variety of infrastructural issues, such as the lack of digital skills amongst lecturers and lack of institutional support in most developing countries, including Nigeria, impede the effectiveness of these platforms (Dhawan, 2020). The transition to online teaching also revealed that there are gaps in the preparedness of the institutions, and that teachers need to adapt their teaching methods to online environments. Online platforms are flexible and accessible but may lack the dynamics of face-to-face instruction, specifically in terms of meaningful interaction and engagement (Dhawan, 2020). These difficulties warrant reflection on the nature of using Google Classroom for lecturing and its effectiveness in delivering the lesson.

Higher education lecturers deliver learning to adult learners who want to be autonomous, interact and have learning experiences that are practical. Indeed, digital platforms (such as Google Classroom) are not only technologically successful, but also depend on how lecturers use them in their teaching to enhance the principles of adult learning.

The study is situated in the theories of Knowles' Andragogy, Mezirow's Transformative Learning Theory, and Technological Pedagogical Content Knowledge (TPACK). Knowles' theory states that adult learners are self-directed, experiential, problem-based and will learn when it is relevant to their needs (Knowles, 1984). In this respect, digital platforms like Google Classroom can foster adult learning by facilitating learner autonomy, flexible access to content, co-construction and self-paced learning, which is in line with andragogical assumptions.

Digital Learning can also be considered from the perspective of Transformative Learning Theory as an adult learning process that involves critical reflection and can change attitudes and practices (Mezirow, 1997). Mezirow (1991; 1997) defines it as a “*disorienting dilemma*” when, in the context of COVID-19, the swift transition to online teaching forced lecturers to question and rethink traditional pedagogies and embrace new ways of teaching and learning. This lens can be used to ask the question of whether Google Classroom was used as an emergency response or as a tool to promote meaningful pedagogical change.

The TPACK framework, besides these adult learning perspectives, offers a lens to view how lecturers can effectively use technology when integrating technological, pedagogical, and content knowledge. The educational value of digital tools is not inherent in the technology, but in the ways that good pedagogy and disciplinary knowledge are integrated with technology by the educator (Mishra & Koehler, 2006). This is especially important in interpreting the differences in perceptions of lecturers on the effectiveness and the limitations of Google Classroom. In addition, the Technology Acceptance Model provides additional supporting insight that the lecturers' perceptions of usefulness and ease of use of the platform could impact the adoption and ongoing use of the platform (Davis, 1989). When combined, these perspectives create a conceptual construct for discussing Google Classroom beyond the technological, towards the pedagogical, and into the implications for adult learning in the higher education sector after the pandemic.

Although online learning, including Google Classroom, has been embraced in Nigeria's universities during the COVID-19 pandemic, there is little empirical evidence of how lecturers in these universities utilize Google Classroom and the level it facilitates effective instructional practices. Previous research has concentrated on student experiences, and there has been less research that has considered the lecturer's perspective, especially in a low-tech environment where technology is used in a context where infrastructure and pedagogical factors are a concern. So, it remains to be seen whether Google Classroom is being adopted to maintain continuity of teaching or to achieve major changes in pedagogical approaches in college education. Numerous institutions shifted their learning and teaching to online education at a rapid pace, and lecturers lacked training and support for using digital tools in pedagogy.

While most of the previous studies have been centred on students' experiences, there is a lack of studies that have been done focusing on the perspectives of the lecturers, particularly in developing countries, where technological use is affected by the pedagogical and infrastructural challenges (Bozkurt *et al.*, 2020; Watermeyer *et al.*, 2021). However, it would be difficult to conclude whether the use of Google Classroom is limited to simply 'continuing teaching' or if this is a pedagogical shift in higher education. A number of institutions moved to online learning very rapidly, and lecturers received little training and support to be able to effectively incorporate the use of digital tools in pedagogy (Bozkurt *et al.*, 2020; Watermeyer *et al.*, 2021).

This means that the platform would not be suitable for interactive learner-centred approaches to teaching, which results in concerns about the quality of teaching and learning. Such concerns are exacerbated by factors such as low digital skills, substandard internet connectivity and limited technological infrastructure, which remain limitations in online learning in developing contexts.

Given these challenges, it is essential to critically examine the pedagogical use of Google Classroom by instructors in Nigeria's higher education institutions to appreciate its strengths and weaknesses, as well as its implications for adult learning in the post-COVID-19 world. This study therefore examined the use of Google Classroom for teaching by lecturers at Obafemi Awolowo University and how it enables or inhibits effective instructional practice.

2. Research Objectives

- 1) To examine lecturers' perceptions of the influence of Google Classroom on their teaching practices at Obafemi Awolowo University.
- 2) To assess the perceptions of lecturers on the effectiveness of Google Classroom in facilitating the delivery of instruction.
- 3) To analyse the strengths and weaknesses of Google Classroom as a pedagogical tool in higher education.

2.1 Research Questions

- 1) What are the perceptions of lecturers on the impact of Google Classroom on teaching practices at Obafemi Awolowo University?
- 2) What are the lecturers' perceptions of the effectiveness of Google Classroom for instructional delivery?
- 3) What are lecturers' perceptions of the strengths and limitations of Google Classroom as a pedagogical tool in higher education at Obafemi Awolowo University?

3. Methodology

A descriptive survey research design was used for the study to examine the level of utilization of Google Classroom by lecturers for teaching in Obafemi Awolowo University during the COVID-19 pandemic, and its implications for adult learning in the post-COVID-19 era. It was thought to be acceptable because it would provide for the systematic gathering of data on participants' perceptions and experiences, without manipulation of variables. It is therefore suitable to be used in educational technology research.

The study population consisted of the academic staff of Obafemi Awolowo University who were exposed to Google Classroom during the COVID-19 pandemic, which led to the shift to online learning. The respondents were selected through a

purposive sampling technique because they were involved directly with the platform. There were 80 respondents, all from 4 faculties – Arts, Science, Environmental Design and Management and Agricultural Sciences. This enabled representation from disciplines across the spectrum of different degrees of engagement with digital instructional tools.

A structured questionnaire was used for data collection, and the questionnaire was labelled “Assessment of Google Classroom for Teaching and Learning in Obafemi Awolowo University Ile-Ife”. It was designed through a literature review of Learning Management System and, Digital Pedagogy, and Instructional Delivery. The survey was divided into four sections. Section A: asks respondents to provide demographic information. Section B: Attitude towards the impact of Google Classroom on teaching practices. Section C: The effectiveness of Google Classroom as perceived by the lecturers, and Section D: Teacher strengths and limitations with Google Classroom. Answers were given on a 5-point Likert scale.

Face and content validity of the instrument were done by experts in educational technology and measurement and evaluation. The feedback was used to enhance the clarity, relevance and congruence of the items to the research objectives. The reliability of the instrument was determined by a pilot test and was found to have a Cronbach's alpha of 0.87, which means that it has good consistency for research purposes.

Data were gathered using a mix of online administration (Google Forms and email) and distribution of questionnaires, which reached a wider audience and increased the response rate. The respondents participated voluntarily, and their confidentiality was guaranteed.

The data were analysed in IBM SPSS Statistics Version 27. The descriptive statistical tools that were used to summarise the perceptions of the respondents were frequency counts and percentages. The results were presented in the tables and discussed in relation to the research questions and the existing literature.

4. Results and Discussion

Research Question One: What are the lecturers’ perceptions of the influence of Google Classroom on teaching practices at Obafemi Awolowo University?

Table 1: The Influence of Google Classroom on Teaching Practices

Question	Agree		Neutral		Disagree	
	Fre	%	Fre	%	Fre	%
Lecturers can facilitate online discussions between students and create group projects within the classroom	59	73.8	10	12.5	11	13.8
Google Classroom can help teachers streamline summative and formative assessments	51	63.8	16	20.0	13	16.3
Google Classroom helps lecturers save time, keep classes organized, and improve teaching efficiency	52	65.0	13	16.3	15	18.8
Google Classroom gives lecturers access to information anytime and anywhere	70	87.5	5	6.3	5	6.3

Google Classroom allows better communication between lecturers and students	32	40.0	11	13.8	37	46.2
Google Classroom is an easy way of grading scores	41	51.3	23	28.7	16	20.1
Google Classroom does not provide automated quizzes and tests for learners	21	26.3	11	13.8	48	60.1
Google Classroom allows for virtual assessments	14	17.6	7	8.8	59	73.8
Google Classroom makes it easy to customize assignments for individual learners	68	85.0	2	2.5	10	12.5

Table 1 shows that the majority of lecturers considered Google Classroom to have positive effects on practice in shaping teaching practices, including improving flexibility, instructional organization, collaboration, and access to learning resources. These results indicate that the platform was able to offer meaningful and ongoing support for continued teaching continuity during the COVID-19 disruption.

Nevertheless, the data also suggest its impact was greater in functional teaching support than as a force for bigger pedagogical change. The robust consensus that Google Classroom supports online discussion, group work, and customised assignments suggests it is perceived as a value-adding device in the practice of collaborative and learner-centred teaching. Studies that support these findings can be found in the literature that portrays digital learning platforms as enablers for interaction, differentiated instruction, and collaborative building of knowledge (Al-Marroof & Al-Emran, 2018). The positive rating with regard to effective management of instruction and organization reinforces claims raised already of learning management systems can enhance pedagogical efficiency within higher learning institutions by lecturers themselves regarding their use. Just as, but also more significantly, is the high degree of agreement on the accessibility of teaching resources, emphasizing flexibility as one of the most appreciated features of the platform. This is consistent with broader evidence of the role digital platforms have played as crucial intermediaries of educational continuity in the age of the pandemic, notably by increasing access beyond temporal and spatial constraints (UNESCO, 2020).

In terms of andragogical principles, flexibility and learner autonomy are at the heart of adult learning; hence, this finding is significant. Positive perceptions, however, were not universally held. Responses regarding the effectiveness of communication and virtual assessment highlight important tension in lecturers' experiences.

Despite allowing for content sharing and asynchronous interaction, it can be hard to avoid perceiving Google Classroom as an inferior platform for sustaining rich dialogic engagement: the relatively high disagreement on lecturer–student communication suggests this. This feeds into concerns that, unless supplemented by more interactive approaches to pedagogy, digital platforms tend to enable transactional rather than relational aspects of teaching. Likewise, although respondents mostly agreed on the availability of assessment functions, in the case of grading and virtual assessments, there are mixed responses which indicate that technological affordances are not sufficient to ensure effective pedagogy. This unevenness might be the result of differences among

lecturers' levels of digital proficiency or, according to the TPACK framework, constraints that exist between technology tools and good pedagogical and disciplinary practice.

In this regard, some of those perceived constraints are arguably more rooted in the gap of an uneven capacity of pedagogically meaningful technology use, rather than the platform. Notably, there is a dissonance in the acceptance of Google Classroom's assessment instruments versus the scepticism about its support for virtual evaluation. If anything, it may not be just inconsistent answers. However, it might also suggest a split among lecturers in teaching between basic management of assessment and more sophisticated forms of online assessment, which require authenticity, rigour, and higher-order evaluation. This interpretation is important because it goes beyond a merely functional one to include questions of pedagogical quality. Collectively, the findings indicate that lecturers perceived Google Classroom as primarily supporting adaptive teaching practices when a disruption occurred but less as a mechanism for generating transformative pedagogical change; therefore, the extent to which digital learning enabled adaptive teaching was limited. This distinction is important.

Based on Mezirow's Transformative Learning Theory (Mezirow, 1975), it seems that the results suggest evidence of instrumental adaptation, rather than changes in the pedagogical practices or philosophy of teaching. In that light, while Google Classroom was identified as an alternative pedagogical support tool, its transformative value to educators seems to be contingent on further embedded pedagogical redesign, increased mastery of digital technology, and institutional infrastructure. Generally, these results support the contention that mere adoption of technology does not necessarily amount to pedagogical novelty. To the contrary, the educational value of platforms such as Google Classroom is a function of how they are positioned within wider pedagogical and teaching philosophies. In this sense, the results place Google Classroom not in the role of a disruptive technology per se, but as an empowering context whose effect depends on the pedagogical framework in which you apply it.

Research Question Two: What are the lecturers' perceptions of the effectiveness of Google Classroom in facilitating instructional delivery?

Table 2: Effectiveness of Google Classroom in Facilitating Instructional Delivery

Question	Agree		Neutral		Disagree	
	Fre.	%	Fre.	%	Fre.	%
Google Classroom helps in simplifying learning complexities for both practical and non-practical courses.	30	37.5	6	7.5	44	55.1
Google Classroom as an online learning platform positively affects academic achievement.	54	72.0	9	12.0	12	16.0
Google Classroom enhances information literacy among lecturers.	63	78.8	8	10.0	9	11.3
Google Classroom helps lecturers in supporting students who struggle to listen in class.	25	31.3	15	18.8	40	50.0
Google Classroom allows for easy revisit of uploaded materials.	63	78.8	5	6.3	12	15.1
I prefer using Google Classroom over face-to-face classes.	49	61.3	15	18.8	16	20.0

With the use of Google Classroom, distraction is inevitable.	30	37.6	8	10.0	42	52.6
Google Classroom allows for organized learning.	49	61.3	12	15.0	19	23.8

The level of support that lecturers feel Google Classroom provides for instructional delivery is shown in Table 2. The combined results suggest that, overall, the lecturers were fairly positive about the positive impact of the platform on organized learning, access to instructional materials, academic support, learner autonomy, and so on. They also found that perceptions were more negative in terms of its capacity to facilitate more hands-on learning and its capacity to help deal with more complex instructional needs, suggesting a difference in its capacity to offer routine instruction and in its capacity to facilitate more complex pedagogical needs.

Google Classroom was perceived to enhance the important elements of instruction given by lecturers in this study through the eyes of Positive educational achievement, information literacy, and organised learning perceptions. The platform provides a high level of consensus with regard to improving access to learning materials and being able to easily access previously uploaded content to support continuity, reinforcement, and self-paced learning. The results are aligned with studies that have found that digital learning technologies create flexible contexts for student learning, mediated by the student, and that this could lead to more attention and student-level outcomes. It is important that the lecturers agree that Google Classroom is information literate. Outside of an instructional delivery role, these points point to the potential role of using the platform to influence professional digital skill set, which will make the platform's impact spill over to teaching effectiveness and lecturer development. This is important in the post-COVID higher education context for people's digital preparedness and for their pedagogical resiliency in the longer-term.

In addition, the results are in line with andragogical assumptions and concepts about Adult Learning, and learners benefit from these when they are given autonomy, relevance, and flexible access to learning resources. The good attitudes towards organized learning, self-determined access, and support for the learner, as well as the lecturers, suggest the acceptance of the potential of the platform in the field of opportunities for adult learning. However, the lack of high marks for support with practical and complex learning tasks also signifies significant gaps. When there are no practical applications, an inquiry into the percentage of lecturers who disagree with the concept that Google Classroom makes learning easier shows some scepticism towards the effectiveness of Google Classroom in a scenario that requires some demonstration, experimentation, practical engagement, and so on.

This discovery corroborates the general concerns about the possibility of digital platforms providing access to content, but less to more practical pedagogies. The majority of perceptions were negative about the support provided to learners who could not hear the lecture in class, which was also the perception of the lecturers, whether the platform provided adequate support for students' needs. This suggests the notion of digital learning accessibility not only as access to content, but as responsiveness to various

learning challenges. There is also an important difference in that some lecturers had mixed feelings, and others preferred Google Classroom over face-to-face teaching. While most faculty members were open to either digital or blended learning, the findings do not clearly suggest a shift away from the traditional pedagogy. Instead, they suggest a positive trend towards enhancing the use of technology for teaching rather than replacing it. A TPACK perspective on these mixed perceptions highlights the significance of how successful digital platforms are in relation to pedagogical content and technology. Restrictions that the respondents took note of can indicate problems of integration, as well as some restrictions that are a feature of the platform itself.

As such, the findings suggest that Google Classroom is more effective for structuring and flexibility in teaching and learning and less effective for handling more complex, realistic and very interactive aspects of teaching. This is consistent with the argument that digital platforms can offer an enhancement in instruction without changing pedagogy, unless in the context of pedagogical innovation.

Research Question Three: What is the lecturers' perception of the strengths and limitations of Google Classroom as a pedagogical tool in higher education at Obafemi Awolowo University?

Tables 3 and 4 illustrate the lecturers' assessment of the strengths and limitations of Google Classroom as a pedagogical medium. All of this indicates a complex evaluation in which flexibility, feedback, communication and collaboration are valued, while critical and engagement-oriented instruction, infrastructural limitations and technological limitations are serious concerns.

Table 3: Strengths of the Use of Google Classroom by Lecturers

Question	Agree		Neutral		Disagree	
	Fre	%	Fre	%	Fre	%
Google Classroom allows effective communication and sharing.	62	77.4	9	11.3	9	11.3
Google Classroom provides room for an effective assignment collation process.	39	48.7	28	35.0	13	16.3
Google Classroom gives effective feedback to the students.	61	76.25	5	6.25	14	17.5
Creates a nice virtual classroom for the lecturers.	30	37.5	5	6.25	45	56.25
Google Classroom is more cost-effective and better for the environment.	45	56.25	10	12.5	25	31.25
Google Classroom is a better substitute for a notebook.	50	62.5	16	20.0	14	17.5
With Google Classroom, teaching and learning becomes more flexible.	68	85.0	4	5.0	8	10.0
Google Classroom provides more opportunities for critical thinking skills.	16	20.0	4	5.0	60	75.0
With Google Classroom, collaboration is easier outside of school.	45	56.25	17	21.25	18	22.5
I prefer the use of Google Classroom to the traditional means of face-to-face teaching and learning.	57	71.25	9	11.25	14	17.5

Table 4: Limitations of the Use of Google Classroom by Lecturers

Question	Agree		Neutral		Disagree	
	Fre	%	Fre	%	Fre	%
Each user needs their own Google account	58	72.5	6	7.5	16	20.0
Google Classroom doesn't provide automated quizzes and tests for your learners.	19	23.75	10	12.5	51	63.75
Google Classroom does not allow the use of virtual aids.	37	46.25	15	18.75	28	35.0
High cost of maintaining in terms of data usage.	36	45	9	11.25	35	43.75
Google Classroom has limited integration options.	52	65.0	14	17.5	12	15.0
Irregular electricity power is a major challenge for using Google.	34	42.5	9	11.25	35	43.75
Google Classroom does not capture the applied and technical aspects of learning.	46	57.5	20	25.0	14	17.5

Flexibility was recognised as the most common value and the most influential element of the platform through the results. This is aligned with the literature, which indicates flexibility is an important element in online and blended learning. Google Classroom's perceptions of favourable feedback, assignment management, collaboration, and communication add to the appeal of facilitating interaction and course management.

The results also show that the lecturers are satisfied with the platform not only for administrative purposes, but also for the extension of learning outside the classroom. Improved perception of greater collaboration outside of school and preference for Google Classroom (rather than using traditional teaching methods) reflects the growing acceptance of digitally mediated and hybrid models of teaching, which is important in that it means the platform does not just seem to be seen as an "emergency response" but instead, the dynamic pedagogy of higher education. However, there are significant limitations associated with these assets.

Most impressively, there is so much disagreement that Google Classroom encourages critical thinking skills. This would imply that the platform may be useful for content management and interaction, but not for higher-order thinking processes by instructors. These results bolster long-held claims that transformative learning results less from the technology than from the pedagogical forms of technology utilization. Likewise, limited technical and applied learning opportunities on the platform bring boundaries to its usefulness in key disciplines. In practice-based learning and skills-based learning, lecturers do not seem to see Google Classroom as the best tool, so they are using other technologies to complement the use of simulations, demonstrations, and interactive practice.

Additionally, structural and infrastructural interferences became an important factor. Fears about integration, data costs, electricity availability or access to hardware raise issues around the material conditions of use, not only pedagogical issues, as they continue to affect perceptions of digital pedagogy. This is particularly true in situations where resources are limited and technological possibilities are frequently limited by infrastructure.

Indeed, the results reveal a duality between pedagogical and contextual constraints. Some of the concerns (critical thinking or practicality) are pedagogical (inadequacies), and others (data cost and electricity) are systemic (inadequacies). This is analytically important in that it means that an increased influence of digital learning requires pedagogical innovations and institutional investment. From the perspective of the learning transition stage, these contradictory findings also corroborate the impression that the impact of Google Classroom appears to be mainly adaptive and not transformative. The platform offers flexibility and continuity but has less potential for changing pedagogy. Therefore, taking into account what is understood about TPACK, the strengths and limitations of the platform can be attributed to lecturers' integration capacities, which involve pedagogy and content with technology.

These results position Google Classroom as a pedagogical tool that deserves great consideration and use as a resource for organizing, communicating, and adapting learning, but that cannot function as a versatile learning space for transformative and practice-oriented, higher-order learning. The platform and its long-term value to post-pandemic higher education are thus not entirely contingent on what it is capable of; rather, it's the positioning of the platform in a wider matrix of digital pedagogical ecologies.

5. Conclusion

This study examined the perceptions of lecturers regarding the use of Google Classroom in teaching at Obafemi Awolowo University, with particular focus on how Google Classroom affects the teaching methods, how effective it is in assisting teaching, and its strengths and weaknesses as a method of teaching. Based on the results of this study, in general, the lecturers consider Google Classroom as an instructional medium that can support the development of higher education teaching, because Google Classroom has features that are flexible, accessible, collaborative, provide feedback, and organize learning activities.

The study shows, through its study of teaching practice and Google Classroom, that the latter has a positive effect on teaching practices based on the efficiency of delivery of content, access to instructional resources, provision for differentiated instruction, and opportunities for collaborative, peer-based learning. This also proved useful for structuring the lessons more flexibly, in a large part of the classroom, thanks to the learning material being more accessible, and for students to be more autonomous.

In addition, instructors noted key pedagogical advantages provided by Google Classroom, such as promoting communication, assignment management and feedback, and flexible learning. This means the platform is no longer limited to being a "reactive emergency tool" in response to the COVID-19 pandemic but rather is becoming a key concern in the current digital pedagogy of higher education.

In contrast, the study revealed that there are several drawbacks in the pedagogical potential of Google Classroom, such as limited space for applied and technical learning,

limited integration options, issues with infrastructure and data costs, and a lack of a means for higher-order thinking in isolation. The platform was also found to be less robust in terms of rich interactions and more complex assessment practices.

As a whole, the study reveals that even with Google Classroom, the idea of 'making learning work' appears to be the primary drive, rather than a paradigm shift in learning. The flexibility and autonomy that some of the andragogical principles of this platform advocate are not fully realized due to a limited pedagogical redesign, infrastructural obstacles, and teachers' technology competencies. With a TPACK lens, the true value and impact of digital pedagogical integration following the pandemic will be felt once students come to know pedagogy and content through digital practice and further embed it in practice.

6. Recommendations

Based on the results of this study, the following recommendations are made:

- 1) Colleges and universities need to provide training and support for lecturers to use Google Classroom effectively, including how to teach interactively, give online tests, provide feedback and keep students engaged.
- 2) Universities should make sure they have internet access, backup power systems and support staff to help remove obstacles that can prevent the successful use of digital learning tools.
- 3) Since Google Classroom may not be enough for hands-on and technical learning, institutions need to use digital tools that allow for simulations, virtual labs and interactive learning.
- 4) New policies should be created to encourage the use of learning platforms by working with institutions providing affordable internet access and offering special data plans for education to reduce costs.

6.1 Limitations of the Study

This study has some limitations because it was based on what teachers said about their experiences at one university, which might not apply to other places. Also, the study did not prove that using Google Classroom directly improves teaching.

6.2 Implications for Practice, in Adult Education

The study shows that digital learning platforms can help adults learn by giving them control and flexibility, but to really make a difference, teachers need to use these tools in a way and schools need to support learning experiences.

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Conflict of Interest Statement

The authors declare no conflicts of interest that could have influenced the research, authorship, or publication of this work.

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