WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

THE EFFECT OF GOOGLE CLASSROOM AND YOUTUBE AS EDUCATIONAL TOOLS ON THE ACADEMIC PERFORMANCE OF STUDENTS. A CASE STUDY OF GOOD SHEPARD INTERNATIONAL SCHOOL

TINALI SENGHANO[1], DR. SUMATHI SRIPATHI[2]

[1] MASTER'S DEGREE IN EDUCATION ADMINISTRATION AND MANAGEMENT, DMI-ST. EUGENE UNIVERSITY
[2] DMI-ST. EUGENE UNIVERSITY NUMBER:2435177018

ABSTRACT :

This research study adopted mixed research methods to assess the effect of using Google classroom and YouTube as educational tools on the academic performance of students. The study aimed to describe the level of adoption of Google Classroom and YouTube as education technologies in schools, to assess the effect of Google Classroom and YouTube on syllabus delivery, and to analyze the impact of Google Classroom and YouTube on students' learning progress. The study adopted an abductive approach and data was collected from a total sample of 50 participants comprising of 40 students and 10 teachers. The data was analyzed using qualitative and quantitative methods. The qualitative data was analyzed using thematic and content analysis. The data was presented in tables showing themes. Quantitative data was analyzed using descriptive and inferential statistics. The descriptive data was analyzed using frequencies and percentages and presented in tables and figures. Inferential statistics was analyzed using regression analysis and the data was presented in tables. The findings of the study have shown that there is a high adoption of online technologies in schools. The study has revealed that schools use Google classroom and you tube to teach as well as carry out assessments. The findings have shown that the use of Google classroom and YouTube makes it easy to deliver syllabus content in time. The study has found that the use of Google classroom and YouTube helps to improve the overall learning progress of students. Using Google classroom and YouTube, teaching and learning has been made simple. Teachers are able to teach a lot of content and are able to use multiple resources to teach. The study has found that the use of educational technologies is very key in ensuing that the quality of education is help up to and beyond the required and expected standard. The use of online educational technologies such as Google classrooms and YouTube for learning and teaching helps teachers to deliver the intended content and syllabus. Online educational technologies such as Google classrooms and YouTube helps schools to be able to use multiple resources and help learners to be exposed to various contents that would help to expand their knowledge.

Key words: Online educational technologies, Google classrooms, YouTube

INTRODUCTION

The evolution of digital education has catalyzed a paradigm shift in how learning is delivered, accessed, and experienced globally. Technological tools—once perceived as optional enhancements—have become integral to mainstream instruction, particularly following the global education disruptions caused by the COVID-19 pandemic. This shift has exposed systemic vulnerabilities but also highlighted the transformative potential for educational technology (EdTech) platforms such as Google Classroom and YouTube (Chingos, Griffith, & Blagg, 2022). These platforms, designed for flexibility and scalability, have been widely adopted across learning institutions to address content delivery gaps, promote learner engagement, and extend learning beyond traditional classrooms (Noetel, et al., 2021).

Google Classroom operates as a virtual learning management system, allowing for the distribution of learning materials, assignment submission, feedback, and teacher-learner communication—all within a unified interface (Iftakhar, 2016). Meanwhile, YouTube functions both as a content repository and a pedagogical medium that integrates visual and auditory modes of instruction. It facilitates differentiated learning through tailored content, fostering greater learner autonomy and improved retention (Alimemaj, 2020; Kay, Leung & Tang, 2018). Both platforms align with contemporary theories of constructivist and multimedia learning, which posit that students learn best when actively engaged with content through multimodal experiences (Mayer, 2009).

Despite their potential, the integration of online learning tools remains uneven in low-and middle-income countries. In many parts of sub-Saharan Africa—including Malawi—EdTech adoption is shaped by factors such as limited infrastructure, affordability of internet-enabled devices, inconsistent electricity supply, and varying levels of digital literacy among educators and students (UNESCO, 2021). Mpungose (2020) underscores how the pivot to online learning in South Africa disproportionately disadvantaged learners in under-resourced schools, thus mirroring broader inequalities rooted in digital access.

In Malawi, the National Education Sector Investment Plan (NEISP) 2020-2030 places digital learning at the center of education reform, advocating for scalable, inclusive technology adoption in schools (Ministry of Education, 2020). While the policy signals political commitment, operationalization remains partial, especially in rural districts where connectivity and training remain limited. Pilot initiatives, such as those supported by the digital Malawi Program, have introduced blended learning approaches in selected schools, but systematic evidence of their effectiveness is scarce (National Planning Commission, 2021).

Problem statement

The global shift toward online education has amplified the integration of digital tools such as Google Classroom and YouTube into mainstream teaching and learning. These platforms, while originally designed for communication and content dissemination, are increasingly utilized to facilitate instruction, assessment, and learner engagement (Noetel, et al., 2021). However, despite their growing presence in educational discourse and practice, the actual impact of these tools on students' academic performance remains underexplored in the context of Malawian secondary education. Most existing studies either focus on infrastructure availability or general perceptions of ICT integration, leaving a critical knowledge gap regarding the pedagogical efficacy of specific platforms and their influence on syllabus coverage and their influence on syllabus coverage and learning outcomes (Mpungose, 2020; Ministry of Education, 2020).

The urgency to address this gap was intensified by the COVID-19 pandemic, which disrupted traditional classroom learning and underscored the need for scalable, accessible, and effective digital learning models (Chingos, Griffith, & Blagg, 2022). During this period, schools in Malawi made tentative attempts to adopt online tools, yet little is known about the level of adoption, quality of implementation, or their measureable educational value. Furthermore, there is insufficient empirical data examining how learners interact with and benefit from platforms like YouTube and Google Classroom—tools that inherently support self-paced, visual, and feedback-rich learning environments (Kay, Leung, & Tang, 2018; Mayer, 2009).

In addition, while national education policies such as the NEISP 2020-2030 advocate for digital transformation in teaching and learning, these strategies often assume uniform readiness and impact across school systems (Ministry of Education, 2020). Such assumptions overlooked disparities in access, digital literacy, and school leadership capacity, which fundamentally affect how technology is adopted and whether it results in equitable learning outcomes.

Research objectives

This study aimed to evaluate how online education tools—specifically Google Classroom and YouTube—affect syllabus delivery and student learning in Malawian secondary schools.

Main objective

To analyze the effect of Google Classroom and YouTube on students' academic performance.

Specific objectives

1. To describe the level of adoption of Google Classroom and YouTube as education technologies in schools.
2. To assess the effect of Google Classroom and YouTube on syllabus delivery
3. To analyze the impact of Google Classroom and YouTube on students' learning progress

Theoretical framework

This study was underpinned by three interrelated theoretical perspectives: The Technology Acceptance Model (TAM), Constructivist Learning Theory (CLT), and the Cognitive Theory of Multimedia Learning (CTML). These frameworks collectively provide a robust lens through which to examine the adoption, pedagogical function, and cognitive impact of Google Classroom and YouTube in secondary school instruction.

Technology acceptance model (TAM)

Originally developed by Davis (1989), the Technology Acceptance Model posits that an individual's decision to adopt and use a technology is primarily influenced by two constructs: *Perceived Usefulness (PU)* and *Perceived Ease of Use (PEOU).* PU refers to the extent to which a person believes that using a system would enhance their performance, while PEOU reflects the degree to which using the system would be free of effort.

Within the context of this study, TAM serves to explain the behavioral intention and actual usage of Google Classroom and YouTube by teachers and students. Previous studies have applied TAM successfully in educational settings to understand factors that drive or inhibit technology integration in pedagogy (Venkatesh & Davis, 2000; Teo, 2011). The model is instrumental in evaluating digital adoption trends, particularly in low-resource contexts where technological confidence and institutional support may vary significantly.

Constructivist learning theory (CLT)

The Constructivist Learning Theory grounded in the works of Piaget (1972), Vygotsky (1978), and Bruner (1960), emphasizes that knowledge is actively constructed by learners through experience, interaction, and reflection. Learning is most effective when students are engaged in meaningful tasks that foster critical thinking collaboration, and contextual application

In this study, CLT underpins the pedagogical rationale for using Google Classroom and YouTube. These platforms enable self-paced exploration, peer interaction, and task-based learning, which align with constructivist ideals. CLT provides the theoretical basis for analyzing whether and how digital tools promote deeper cognitive engagement, learner autonomy, and active knowledge construction in syllabus delivery.

1.10.3 Cognitive theory of multimedia learning (CTML)

The Cognitive Theory of Multimedia Learning. Formulated by Mayer (2009), posits that learners process information through dual channels—visual and auditory—and that meaningful learning occurs when content is well-integrated, and cognitive load is effectively managed. CTML emphasis that instructional media should promote selecting, organizing, and integrating knowledge to maximize retention and transfer.

YouTube, as a multimedia platform, exemplifies the principles of CTML by offering multisensory instructional content. The theory supports the idea that carefully designed video materials can enhance comprehension, stimulate interest, and deepen learning outcomes—particularly in complex or abstract subjects. In this study, CTML frames the investigation into how YouTube may mediate cognitive engagement and academic performance.

Integrative framework

By combining TAM, CLT, and CTML, this study constructs a multi-layered theoretical framework:

- TAM explains user adoption and behavioral intention.
- CLT informs the pedagogical use and instructional interaction within digital platforms.
- CTML accounts for the cognitive effects of multimedia content on learner comprehension.

This integrative approach strengthens the analytical capacity of the study, enabling a holistic investigation into both the structural and pedagogical factors that shape the influence of Google Classroom and YouTube on syllabus delivery and academic performance in secondary education

LITERATURE REVIEW

A study by Galy, et al., (2011) investigated the factors influencing student performance as reflected by their final course grade. The Technology Acceptance Model explains computer acceptance in general terms. The model measures the impact of external variables on beliefs, attitudes, and intentions. Perceived Usefulness and Perceived Ease of Use, two main constructs in the model, refer to an individual's perception of how the adoption of a new technology will increase their efficiency, and the individual's perception of how easy the technology will be to use. The lower the perceived effort is, the easier the technology will be to adopt. Thus, Perceived Usefulness, Perceived Ease of Use, Computer Self-Efficacy, and Computer Anxiety were measured to determine their effect on student performance.

A study by Tawafak, et al. (2018) on the impact of technology learning and assessment found that the use of technology in learning accelerates learning. Mamedova, et al., (2023) online education platforms did not cause any effect on the results of engineering students. The result of the research has shown that modern digital tools such as Microsoft Teams, Google Classroom, Quizlet, YouTube, Skype, and Zoom, among others, have provided a highly effective educational process

Asif, et al., (2022) found that technological tools had a positive impact on English Language Learners at Tertiary level. A study in Saudi found that lack of skill, motivation, and equipment hindered the effective use of computers in learning in males than female students (Sabti & Chaichan, 2014). Golshan & Tafazoli (2014) found that technology-enhanced learning contributed to student performance. A study by Liton (2015) found that students are active and enthusiastic with technologies in learning. A study by Osabutey (2022) found that online assessments had a positive impact on students' academic performance. A study in Nigeria found that e-learning tools has a positive effect on student's performance (Adebayo & Omolara, 2019)

Atan and Mahmoud (2022) conducted a quantitative study in Malaysia to investigate the factors influencing the use of Google Classroom among Form four secondary school students. The findings revealed that both students' ICT skills and the availability of ICT facilities were significantly associated with the level of Google Classroom usage.

Research design

Research design is the framework of research methods and techniques chosen by a researcher that allows researchers choose the research methods that are suitable for the subject matter and defines the data collection methods and analysis to be adopted (Saunders, et al., 2023). This research study adopted a concurrent mixed research design. The study adopted the qualitative and quantitative research designs. The quantitative design were used to develop descriptive facts regarding the adoption of educational technologies especially Google classroom and YouTube. The quantitative data was used to draw statistical relationships to make inferences regarding the effect of YouTube and Google classroom on the academic performance of students

Research philosophy

Research philosophy is a system of beliefs and assumptions about the development of knowledge. It is what you are doing when embarking on research: developing knowledge in a particular field (Saunders, et al., 2023). The research philosophy for this study was pragmatism. Pragmatism acknowledges

the value of both quantitative and qualitative approaches in understanding complex phenomena. Pragmatism was selected as it is an approach that emphasizes practicality, utility, and the importance of real-world outcomes in the research process (Saunders, et al., 2023).

Findings

The level of adoption of Google Classroom and YouTube as education technologies in schools.

Usage of Google Classroom and YouTube

The study assed how Google Classroom and YouTube are used in schools. The results show that the majority of the participants pointed that they are used to teach and learn all the time. The majority of the participants pointed that classroom contents are uploaded on both YouTube and Google classrooms all the time. The table and figure 4.3 shows.

Table 4.1 Usage of Google Classroom and YouTube

Statement	All the time	Most times	Rarely	Not at all
Google classrooms are used to teach and learn	70.0%	30.0%	0.0%	
YouTube is used to teach and learn	40.0%	30.0%	30.0%	
Classroom contents are uploaded on both YouTube and Google classrooms	60.0%	20.0%	20.0%	

Proportion of subjects where Google Classroom and YouTube are used

The study assessed the proportion of subjects where Google Classroom and YouTube are used. The results revealed that the majority of the participants highlighted that Google Classroom and YouTube are used in all subjects. The table and figure 4.4.

Table 4.2 Proportion of subjects where Google Classroom and YouTube are used

Proportion of subjects	Frequency	Percentage
All	8	80%
75% of the subjects	2	20%
Half the number	0	0
25% of the subjects	0	0
None	0	0
Total	10	100%

Activities in which Google classroom and YouTube

The study assessed the activities on which Google classroom and YouTube are used for. The study found that loading of lessons was used the most with 72% of the participants citing it, 66% of the participants cited that is also used for communication, 62% cited that is used to give homework, 42% selected that the online tools are used to issue tests such as practice tests and 19% selected that it is sometimes used for lessons. The table and figure 4.5 below shows.

Table 4.3 Activities in which Google classroom and YouTube

Use of Google Classroom and YouTube	Frequency	Percentage
Home work	31	62.0%
Preloaded Lessons	36	72.0%
Live classes	19	38.0%
Communication	33	66.0%
Tests	21	42.0%

The effect of Google Classroom and YouTube on syllabus delivery

Effect of Google classroom and YouTube in delivering classwork

The study assessed the effect that using Google classroom and YouTube has on the delivery of classwork to students. The participants who were teachers highlighted that these platforms are key in ensuring the delivery of classroom work. The teachers stated that there are reference videos uploaded or readily available that helps students whenever they have to learn of understand a particular aspect of the classwork. The emphasis was made that videos play a very crucial role in contributing to the understanding of notes and concepts that the students could not grasp from the teacher. The study found that Google classroom and YouTube provide a platform foe extra lessons outside the designated class times. This helps the teachers to complete content prepared for that period in time. This ensures that everything is covered before examinations. The participants emphasized that using online educational tools such as Google classroom helps the teachers to post notes from various sources easily.

Effect of Google classroom and YouTube in giving homework

The study assessed the effect of Google classroom and YouTube help to give homework. The study found that these online educational tools such Google classrooms are very useful in giving homework. The participants pointed to the fact that using these platforms helps students to access reference materials that they may need to attempt to the homework. The study found that these platforms helps teachers to send homework at any time. This means that teachers are flexible to give homework even outside the classroom.

Effectiveness of learning using Google classroom and YouTube (a)

All of the participants accepted that using Google classroom and YouTube is effective in delivering syllabus.

Effectiveness of learning using Google classroom and YouTube (b)

The study further investigated why the teachers were so confident that the online educational tools were effective, the participants highlighted common themes that the students are able to recall the content that was online. The teachers stated that the students are able to answer questions that they are asked on the spot during lesson, and that the students are able to pass assessments such as tests.

4.4.3 The impact of Google Classroom and YouTube on students' learning progress.

Ability to understand class content using Google classroom and YouTube (a)

The study assessed whether the students are able to understand what they learn online especially when the teachers use Google classroom and YouTube. The study found that the majority, 68%, accepted that they are able to understand what they learn online especially when the teachers use Google classroom and YouTube while 32% pointed that they are not able to understand what they learn online especially when the teachers use Google classroom and YouTube.

Table 4.4 Ability to understand class content using Google classroom and YouTube (a)

Response	Frequency	Percentage
Yes	27	67.5%
No	13	32.5%
Total	40	100%

Ability to understand class content using Google classroom and YouTube (b)

The study assessed the effect of online educational platforms on students' learning progress. The majority of the students stated that they are able to understand content easily because of YouTube and other online materials very well, 62.5% stated that they are able to explore new and extra materials that help me to pass tests very well. The study found that 45% stated that they are able to pass assessments because the content I get online is a lot and sufficient, and the majority stated that they are able to do better in understanding what the teacher is teaching because of the online materials very well.

Table 4.5 Ability to understand class content using Google classroom and YouTube (b)

Statement	Very well	At least most of it	Somehow	Not at all	μ	S
I am able to understand content easily because of YouTube and other online materials	52.5%	27.5%	17.5%	2.5%		
I am able to explore new and extra materials that help me to pass tests	62.5%	32.5%	5.0%	0.0%		
I am able to pass assessments because the content I get online is a lot and sufficient	45.0%	32.5%	15.0%	7.5%		
I am able to do better in understanding what the teacher is teaching because of the online materials	67.5%	32.5%	0.0%	0.0%		

Effect of Google classroom and YouTube on passing assessments

The study analyzed the effect of using Google classroom and YouTube on helping students to pass their assessments. The findings of the study found that videos are easy to understand and this helps the students to be able to recall the contents they watched and learnt using videos as such they end up passing their assessments. The study found that the presence of various sources of information that is presented in different ways makes it easier to understand the concepts. The study found that the online educational tools enables the students to check for what they want to know or remember.

Effect of Google classroom and YouTube help you to grasp content

The students stated that the use of Google classroom and YouTube helps the students to grasp content with less difficulty unlike in classroom learning. The students emphasized that it is easy to follow what the concept is all about. The students pointed that it is easy to go and relearn as such content can be known or understood quickly.

Effect of Google classroom and YouTube affect your level of learning

The study found that using Google classroom and YouTube is essential in improving the level of learning and understanding. The students pointed that the online educational tools are able to provide clear explanations that helps them to grasp and comprehend content being taught easily. The study found that the content found on Google classroom and YouTube are in simplified form, allowing easy understanding. The study discovered that the use of Google classroom and YouTube increases the students' learning ability.

Regression analysis

The study adopted a regression analysis to examine the statistical relationship between using Google classroom and YouTube on the academic performance. The equation $Y = \alpha + \beta x$ was to predict the relationship. In the equation, Y is the used where dependent variable academic performance, α is constant, β is beta and x is the independent variable use of Google classroom and YouTube.

Model Summary

Table 4.6 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.978[a]	.957	.956	.142

a. Predictors: (Constant), Google classroom and YouTube

In the model summary table, R is the relationship between the independent variable and the dependent variable, R square is the proportion of the dependent variable that has been explained by the independent variable. In the table 4.15 above, R is 0.978/(97.8%) which is closer to 1/(100%). This implies that the use of Google classrooms and YouTube has a very strong positive relationship with academic performance of students. R square which is 0.957 shows that use of Google classrooms and YouTube is responsible for 95.7% change in academic performance of students.

ANOVA[a]

Table 4.7 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.530	1	21.530	1065.688	.000[b]
	Residual	.970	48	.020		
	Total	22.500	49			

a. Dependent Variable: Academic performance

b. Predictors: (Constant), Google classroom and YouTube

The ANOVA measures the significance of the independent variable on the dependent variable. The table 4.16 shows that the p-value is 0.000, which is less than the estimated 5% margin of error. As such, the relationship between use of Google classrooms and YouTube and academic performance of students is significant.

Coefficients[a]

Table 4.8 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.116	.136		.852	.399
	Google classroom and YouTube	.979	.030	.978	32.645	.000

a. Dependent Variable: Academic performance

The coefficients of variables table shows the strength and impact of the independent variable on the dependent variable. The equation $Y = \alpha + \beta x$ implies that Academic Performance (AP) = Constant + use of Google classroom and YouTube (UGCY). Using the table thdr above, it means that AP = 0.116 + 0.979(UGCY).

This means that when schools do not use Google classroom and YouTube, the academic performance of students is as low as 0.116 or 11.6%. However, when schools adopt Google classroom and YouTube in teaching and learning, the academic performance of students rises with 0.979 or 97.9% for each single use of Google classroom and YouTube.

Conclusion

Online educational technologies are essential in advancing the achievement of the objectives of education institutions. The study has found that the use of educational technologies is very key in ensuing that the quality of education is help up to and beyond the required and expected standard. The use of online educational technologies such as Google classrooms and YouTube for learning and teaching helps teachers to deliver the intended content and syllabus. Online educational technologies such as Google classrooms and YouTube helps schools to be able to use multiple resources and help learners to be exposed to various contents that would help to expand their knowledge. The adoption of online technologies help schools to be able to cover a wide area in completing the syllabuses.

Additionally, the use of online educational technologies such as Google classrooms and YouTube helps students to perform better in classes. Students get exposed to technology and become sharp. The use of online educational technologies such as Google classrooms and YouTube helps students to have a wide range of access materials to be used in their learning allowing them to access a vast range of materials for easy understanding. The use of online educational technologies such as Google classrooms and YouTube delivers beyond classroom content. Students can use the online educational technologies such as Google classrooms and YouTube at home to learn and parents can have a point of reference if they are to help in explaining the content to their children regarding the school content.