



# Teacher-Trainees Awareness and Perception of YouTube as a Teaching Resource in Colleges of Education in Nigeria

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## Abstract

The development and dissemination of knowledge and information in the discipline of education are significantly facilitated by technology in the digital age. The application of technology in the classroom has the potential to improve student enthusiasm and learning as well as teachers' competence. This research investigates the awareness and perception of YouTube as a teaching resource among teacher-trainees in North-west Colleges of Education in Nigeria. The study explores how trainee teachers view YouTube's potential to enhance their teaching skills, considering both opportunities and challenges. A survey-methods approach was used; the data was collected from 200 teacher-trainees across selected institutions. Two research questions were raised, the first research question results indicate a significant improvement in performance when YouTube is used, with mean scores increasing from 66.48 to 70.25 after targeted training. Similarly, incorporating YouTube as a supplemental tool led to a performance rise from 52.58 to 59.93, a mean difference of 7.35 points compared to traditional methods. The findings highlight YouTube's potential as an effective teaching tool, though increased variability in performance suggests differences in digital literacy and engagement levels among trainees. This underscores the need for tailored training, equitable access, and structured implementation to maximize benefits. The paper concludes by providing recommendations for improving YouTube's integration into teacher education in Nigeria.

**Keywords:** YouTube, teacher-trainees, awareness, perception

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## 1. Introduction

### 1.1. Introduction to the problem

Education has undergone substantial transformations with the advent of technology. Digital tools, particularly video platforms like YouTube, have emerged as powerful teaching aids. YouTube offers a wealth of educational content, which can be used to support teacher education (Rogers, 2019). In Nigeria, integrating technology in education has gained prominence, with teacher-trainees increasingly exploring innovative tools to improve their teaching methods. YouTube is a social networking platform that allows users to access content, play videos, and engage in other types of enjoyment (Abubakar, 2023). YouTube can be used to show students instructional resources in the classroom (Hasnah & Abubakar 2023). The teaching and learning process is still an area where many studies need to be carried out on the merits and impacts of technology and YouTube. There is a dearth of literature in the field (Boonmoh et al, 2021) Today, with the world being digital, technology is a big part of learning environments. It improves teacher and student understanding and facilitates the communication of knowledge (Taghizadeh et al 2020). Education has undergone substantial transformations with the advent of technology. Digital tools, particularly video platforms like YouTube, have emerged as powerful teaching aids. YouTube offers a wealth of educational content, which can be used to support teacher education (Rogers, 2019).

In Nigeria, integrating technology in education has gained prominence, with teacher-trainees increasingly exploring innovative tools to improve their teaching methods. Significant technological breakthroughs have given educators and researchers access to various tools that might improve students' learning outcomes (Nacak et al, 2020) Audu-Marfo et al (2024) argue that today's children are part of the technological generation, having grown up in a multimedia-rich environment and been improved by technology. The education process, beginning with human existence, evolved with the discovery of writing, enabling the transfer of information to future generations through face-to-face teaching methods like Isaac Pitman's shorthand in the 1800s.

The teaching system now has expanded its scope among teaching techniques (2018). Since the day that the internet was launched in 1994, the entire globe has become more digital, the new communication era has begun. Abubakar (2023) stated that the application of digital instrument that replace face-to face teaching or the digital apparatus that enhance face to face is increasing globally. YouTube technology and Internet access have changed the ways that students and teachers educate and learn as a result of recent technical advancements (Şimşek & Ateş, 2022).

YouTube video has brought about significant modifications and developments particularly in the area of education(2024) Gradually, YouTube video technology, a service that makes it possible for people to obtain knowledge without regard to time or location, is becoming increasingly integrated into the educational system.(Gayretll,2023) Videos, as an ICT-based tool, can enhance teaching by stimulating students' interest in learning, enhancing visual perception, and aiding in the advancement of paragraph construction, especially for

the IG generation, which is familiar with technology. YouTube is the biggest and most powerful video website in the world, according to Hanna et al. (2024). YouTube users, especially students, will find it simpler to obtain knowledge while they are studying.

Sarif (2024) in his submission say one of the most popular places to find important information in visual format these days is YouTube videos. It has been categorised as an audio visual aid in multimedia that is utilised in today's classrooms for instruction. Over the past few decades, YouTube has gained widespread recognition as an educational resource. YouTube videos are portrayed in recent study findings as an educational element for learning that supports the latest developments in education. (2024) Recently, YouTube has become a reliable source for both pleasure and education. (Kalburgi et al, 2023) Anyone may create a channel, post videos, and leave comments on other people's movies, there were available movies that covering a wide range of subjects, including politics and education (Guillen et al 2024). As a vital component of the educational system, YouTube helps students develop their social skills and creates a collaborative, accessible, and innovative online environment. (Zhou et al 2020)

Excellent videos assist students with visual impairments and provide a means of elucidating the ideas underlying various phenomena. (2024). It is an old even connection and relationship between film and education, which later steered to the acceptance of video as an educational resource since 1800s. Additionally, as the 20th century went on and technology developed, educators discovered that films could be used as a supplement for almost any subject.( Moghavvemiet et al 2018)

In 2018, Ftoon published his thesis on YouTube, stating that "the YouTube platform is beneficial for use in the educational cycle and system, particularly in colleges, universities, and post-secondary institutions that want to capitalize on the platform's academic credentials.  
(Rouhi et al 2023)

Kasim and Fitriani (2024) explain that many instructional texts utilise YouTube to help students learn languages but to assess how well these kinds of materials affect student results, it is important to know how students perceive the platform. One important aspect of teaching and learning that has to be taken into consideration is the acceptance and perception of students' perspectives (Hasnah, 2023)

Delyuzar and Parmawati (2024) say that despite the availability of YouTube research, it is essential to note that there is still a shortage of empirical evidence of causal relationships between perceived usefulness of YouTube, perceived ease of use of YouTube, student attitudes towards the use of YouTube and Behavioural intention to Use YouTube. According to Serif (2023), the technology of YouTube, which eliminates the concepts of time and distance and enables people to obtain information, is becoming increasingly popular among people engaging in the educational realm daily.

Gracella and Nur (2020) understand YouTube, as one of the most widely used social media platforms in the contemporary period, contributes a lot to the educational domain. Technology, a necessary component of college life, may provide insightful feedback,

particularly when it comes to enhancing and expanding knowledge and English proficiency.

### *Need for the study*

Despite the potential of YouTube as a teaching resource, there is limited understanding of the extent of awareness and perception of this platform among teacher-trainees in Nigeria. It is essential to explore whether teacher-trainees are leveraging YouTube effectively and if they perceive it as a valuable asset in their teaching toolkit (Okoro & Adeyemi, 2020). The submissions of Alhrahseh et al (2024) argue that the use of technology in the classroom has grown crucial in the digital era. There are an immense amount of instruments obtainable by learners on platforms such as YouTube. The popularity and accessibility of YouTube as a medium for academic and informal learning have grown. While technologies such as communications technologies have had a huge influence on people's daily lives, the educational system has remained relatively untouched especially in the colleges of education (Abubakar et al 2023). The Boonmoh et al (2021) observed that the children are engaged by these technologies, which include smartphones, video, tablets, and computers, with the immediacy they are accustomed to. Examining how new technologies could alter teaching strategies and children's learning experiences is necessary as the understanding of learning theory grows, especially concerning information and communications technology.

Through the provision of captivating material, YouTube channels are revolutionizing the teaching profession by augmenting student experience and catering to the varied educational requirements of the younger demographic (Kim et al 2017). Both instructors and students are using YouTube, which is progressively becoming seen as a reliable and viable learning resource. Its use in knowledge acquisition and skill transmission is becoming clearer. It will be interesting to find out how beneficial YouTube Technology is for teaching and learning among IG. It is relevant to examine the teacher-students awareness and perception of YouTube as a teaching resource in colleges of education in Nigeria. Regardless of the obtainability of the technology of YouTube research, it is also crucial to note that there is still a scarcity of literature especially in the field of education and pedagogy.

The main aim of the research is to examine the perception of colleges of education students of North-West zone of Nigeria on the usage of YouTube in academic areas. There is the lack of awareness of students about the utilizations of YouTube video technology as an educational resource. However, it's currently unknown how YouTube videos might effectively support language acquisition in the classroom, given the usage of these videos for learning languages and other subjects is still a relatively new concept and is unclear to the students and teachers. There is indication that there hasn't been much literature written in the field of the study on the perception of students on the usage of YouTube technology for learning in the classrooms especially in the Northern Nigeria particularly in the colleges of education of the zone.

## 2. Significance of the Study

The result of the study may help to develop teaching strategies which the technology of the YouTube could be used to improve students' interest and motivation to learn and to plan more effective and attractive lessons that meet the diverse learning needs of FCEs students

3. Additionally, because it offers insightful information on the possible advantages and difficulties of integrating YouTube into classroom instruction, this study may have consequences for FCEs supporters and legislators. The findings of this study may contribute to the body of information about the literature on the utilization of technology in education, particularly about YouTube's impact on student's perception of learning, both within and outside of the framework of FCEs.

## 4. Research Objectives

The specific objectives of the study are to:

- i) To identify the difference in the mean performance of student teachers using YouTube for academic performance.
- ii) To compare the mean score of YouTube in Education Students before and after

The research answers the following questions:

- i. Is there any difference in the mean performance of student teachers using YouTube as academic purpose?
- ii. What is the difference between the mean score of student teachers taught using YouTube before and after

## 5.1 Literature Review

The current generation applies internet connectivity in every part of their lives as we live in a digital age. Sarid et al (2021) explain the role of digital in educational development by saying “digital technologies have been shown in educational research to have a good influence on learning. These benefits include the potential to promote active engagement, establish connections with the outside world, foster cooperation, and offer regular feedback.” Digital media is essential in educational settings since it meets *students'* requirements and boosts motivation. It helps students succeed academically and fosters professionalism in the modern world by offering on going feedback and entertainment features. (Toto & Limone, 2021)

The submission of Sakkir et al (2020) is of the opinion that by bringing about a paradigm shift, YouTube has transformed teaching by boosting learners' engagement and changing

the way that older students learn. This has also changed the way that education is traditionally approached. The method of using YouTube as supplementary tools for teaching and learning had brought impact to the students of today. Sakkir (2019) say the use of YouTube as a teaching tool is thought to have an impact on the degree of student involvement. This strategy has helped higher education pedagogy gain fresh insights.

YouTube technology will serve so many purposes for learning languages especially English. Most of the clips uploaded were used to for cultural content, linguistic and info that are correlated to the target (2023). The using YouTube for the information that are related to the content will enhance students' performance. Zaid et al (2018) is of the opinion that utilising YouTube in acquiring information for academic purpose is very important and beneficial for illustrating a concept, stimulating learning activity, presenting an alternative point of view and gingering the students. Nowadays is the period of digital technology whereby the contemporary generation usages Internet technology in all parts of their endeavours. Nacak et al (2020) see say YouTube has become a crucial tool in teaching, transforming the learning style of the younger generation from previous generations. This shift in teaching methods, incorporating digital technology, has led to a paradigm shift in higher education, potentially enhancing student engagement and enhancing the overall pedagogical approach (Mady & Baadel, 2020). The technology of YouTube has converted as an important instrument in various colleges and university across the globe. According to Sakkir (2020) the most popular websites among college and university students were YouTube, Facebook, and MySpace. However, the advent of technological instruments like the Internet and the Web has allowed for the use of YouTube in the classroom. Hasnah et al (2023) understand that the current technology has offer a lot of chances to develop the qualities learning and teaching outcome such as YouTube videos, Internet and social media. Teachers will be able to learn more about the interest, preferences, and categories of materials that students use to enhance their learning by observing how students of today obtain information from YouTube in order to learn languages and master English as a second language. Tahmina (2023) suggested that to improve the atmosphere of learning for students, various kinds of teaching techniques and learning exercises could be used in the classroom or through online learning. YouTube's growth in educational video usage is a trend in the educational environment, with more educators using it for teaching and sharing student-created content, as per Alias et al.'s (2013) literature review paper.

aspects of this study have been reported on previously and how the current use of the evidence differs from earlier uses.

## *5.2 Role of Technology in Teacher Education*

The use of technology in education has led to new teaching paradigms, transforming traditional practices. Teacher education has particularly benefited from online resources that provide diverse content, multimedia support, and flexibility (Eze & Nwosu, 2018). The

integration of technology in teacher education has transformed traditional approaches, making learning more interactive, accessible, and effective. Technology's role extends beyond enhancing teaching delivery it also helps develop teacher trainees' digital literacy, adapt to new pedagogies, and meet the evolving demands of 21st-century classrooms. Teacher education programs are increasingly utilizing digital tools to prepare future educators to be proficient in using technology, which is now essential in modern education settings (Adewuyi 2024)

#### a) Enhancing Teaching and Learning Processes

According to Abubakar (2023) Technology has redefined how teachers are trained by providing a range of interactive tools and resources that enhance both theoretical and practical components of teacher education. Platforms such as YouTube Google Classroom and Edmodo offer a variety of video tutorials, lesson plans, and interactive teaching aids that trainees can use to observe, practice, and refine their teaching skills. For instance, YouTube technology offers student-teacher trainees access to numerous educational videos, showcasing expert teachers delivering lessons, classroom management strategies, and subject-specific content. These resources allow trainees to visualize practical teaching strategies and engage in reflective practice, helping them better understand what constitutes effective pedagogy (Smith & Taylor, 2018). By observing different teaching styles and approaches, trainees can adapt their own teaching practices to accommodate diverse student needs.

#### b) Developing Digital Literacy Skills

One of the critical aspects of teacher education today is the development of digital literacy skills. Teachers must be proficient in using technology not only to deliver content but also to engage students and enhance learning outcomes. Technology in teacher education helps trainees learn how to use digital tools for lesson planning, instructional design, assessments, and communication with students and parents (Taylor & Scott, 2020). By incorporating tools like learning management systems (LMS) and educational apps into teacher training programs, trainees become familiar with the technology that is often used in contemporary classrooms (Derakhshan et al 2019)

#### c) Facilitating Micro-Teaching and Self-Reflection

Technology also plays a significant role in micro-teaching, an essential part of teacher education. Micro-teaching involves trainees delivering a short, focused lesson to a small group of peers for feedback. Video recording and playback are crucial elements in this process, allowing trainees to record their lessons, reflect on their performance, and receive constructive feedback from peers and instructors.

Using platforms such as YouTube and Zoom, trainees can record, share, and review their micro-teaching sessions, leading to more effective self-reflection. This practice of reviewing one's teaching performance helps in identifying strengths and areas for improvement, enabling trainees to make informed adjustments and improve their teaching skills (Smith & Green, 2022).

#### *d) Enabling Personalized and Flexible Learning*

Technology has enabled a shift towards more personalized and flexible teacher education. Online courses, webinars, and virtual classrooms provide teacher trainees with the flexibility to learn at their own pace, regardless of geographical constraints. This has proven particularly useful for trainees in remote areas who may not have easy access to physical teacher training institutions (Garcia & Kumar, 2021).

#### *Collaborative Learning and Community Building*

Technology also plays a role in fostering collaborative learning and community building among teacher trainees. Through tools such as online discussion forums social media groups, and collaborative workspaces like Google Docs and Microsoft Teams, trainees can connect with peers, share ideas, and work collaboratively on projects, even if they are not physically present in the same space. This exposure to diverse perspectives enriches their understanding of teaching and helps build a supportive professional network that they can rely on throughout their careers (Martin & Ahmed, 2021).

#### *Preparing for Technology-Enhanced Classrooms*

As the use of technology in classrooms becomes more prevalent, teacher education must prepare trainees to integrate technology into their own teaching practices effectively. Technology-enhanced classrooms, often referred to as smart classrooms, require teachers to use a range of digital tools, including interactive whiteboards, online assessment tools, and educational apps. Teacher education programs that incorporate these tools prepare future teachers to use them confidently and creatively to support student learning (Williams et al., 2020).

Teacher trainees need to understand not only how to use technology but also how to evaluate its impact on student learning. For example, using learning analytics to monitor student progress and make informed instructional decisions is becoming an essential skill for teachers. By introducing these technologies during teacher training, trainees learn to make data-driven decisions that can improve teaching and learning outcomes.

#### *Addressing Challenges and Barriers*



Despite its numerous benefits, integrating technology into teacher education is not without challenges. Limited access to internet connectivity and digital devices remains a significant barrier, particularly in low-income regions. Teacher training institutions must ensure equitable access to digital resources, providing alternatives for those who lack reliable internet or devices (Taylor & Scott, 2020). Additionally, some teacher educators may lack the confidence or skills to use technology effectively, which necessitates on going professional development for teacher trainers.

Another challenge is ensuring that technology is used meaningfully and not just as an add-on. The success of technology in teacher education depends on its thoughtful integration into the curriculum, with a focus on pedagogy rather than merely the tools themselves. Teacher trainees must understand that technology is a means to support learning rather than an end in itself. Technology has become an indispensable part of teacher education, transforming traditional training methods and providing new opportunities for interactive, personalized, and flexible learning. By developing digital literacy skills, facilitating reflective practice, and preparing trainees for technology-enhanced classrooms, technology is helping to shape the next generation of educators. However, to maximize the benefits of technology in teacher education, challenges such as access, digital literacy, and meaningful integration must be addressed.

### *Awareness and Adoption of YouTube in Teacher Training*

Awareness is a critical factor influencing the adoption of technology in education, including YouTube. The extent to which teacher-trainees are aware of the potential uses of YouTube in education plays a significant role in determining whether they will use it in their teaching practices. Studies have shown that in many parts of the world, there is a growing recognition of YouTube's value as an educational tool. However, in Nigeria, awareness of YouTube's educational potential is mixed, with many teacher-trainees still seeing it primarily as a platform for entertainment rather than a learning resource (Akanbi & Popoola, 2019).

According to Akanbi and Popoola (2019), most teacher-trainees in Nigerian Colleges of Education use YouTube for personal purposes, such as music, comedy, or general information. Their awareness of its potential for enhancing teaching and learning is limited, primarily due to a lack of exposure to educational content during their training programs. Moreover, Okoro and Adeyemi (2020) found that less than half of the teacher-trainees surveyed were aware of specific YouTube channels that offer educational content for teacher development, which indicates a significant gap in awareness that limits adoption.

The adoption of YouTube for educational purposes also depends on the level of support that trainees receive during their training. Brown and Smith (2017) argue that trainees are more likely to adopt YouTube as an educational tool when they receive adequate guidance

on how to integrate it into their teaching practice. In the Nigerian context, many Colleges of Education lack the necessary infrastructure and professional development opportunities to support the use of YouTube in training programs (Uche & Ibrahim, 2020). As a result, even those who are aware of YouTube's educational benefits may not adopt it due to a lack of institutional support and technical skills.

### *Perception of YouTube in Teacher Education*

Perception is another key determinant of the extent to which teacher-trainees are willing to adopt YouTube in their educational practice. According to Davis' Technology Acceptance Model (TAM), perceived ease of use and perceived usefulness are major factors that influence the acceptance of technology (Davis, 1989). Teacher-trainees' perception of YouTube as a tool that can enhance their teaching skills is largely influenced by their experiences using the platform. Afolabi (2021) found that teacher-trainees who had used YouTube to support their learning reported a positive perception of the platform. They indicated that YouTube provided easy access to relevant content, helped them visualize complex teaching methods, and offered examples of good teaching practices that they could emulate. Many trainees also appreciated the flexibility that YouTube offers, allowing them to learn at their own pace and revisit content as needed (Smith & Green, 2022). These factors contribute to a generally positive perception of YouTube's role in teacher education.

However, the perception of YouTube is not uniformly positive. Uche and Ibrahim (2020) noted that some teacher-trainees perceive YouTube as unreliable due to the presence of unverified content. The concern about content quality and accuracy discourages some trainees from relying on YouTube for teaching purposes. Furthermore, the distraction potential of YouTube, with its wide range of non-educational videos, can lead trainees to view it as a less serious educational tool. This perception is exacerbated by the lack of formal training on how to critically evaluate and select high-quality educational content from YouTube.

### *Challenges of Using YouTube in Nigeria*

Despite the recognized benefits of YouTube for education, several challenges hinder its effective use among teacher-trainees in Nigeria. One of the most prominent challenges is limited internet connectivity. In many parts of Nigeria, access to reliable and affordable internet remains a significant barrier. According to Uche and Ibrahim (2020), over 60% of teacher-trainees surveyed reported difficulties accessing YouTube due to poor internet connections or high data costs. This challenge is particularly acute in rural areas, where internet infrastructure is underdeveloped.

High data costs are another major barrier. Watching YouTube videos requires a substantial amount of data, which can be expensive for teacher-trainees who are often on limited budgets. As a result, many trainees cannot afford to use YouTube regularly as an educational resource (Akanbi & Popoola, 2019). Without affordable internet packages or institutional support, the cost of data remains a significant impediment to the widespread adoption of YouTube in teacher training.

Another challenge is the lack of digital literacy among some teacher-trainees. Eze and Nwosu (2018) highlighted that while many trainees are comfortable using basic social media applications, they lack the skills needed to effectively use YouTube for educational purposes. This includes knowing how to find reliable educational content, integrating YouTube videos into lesson plans, and using the platform for professional development. Without adequate digital literacy training, many trainees are unable to fully leverage the educational potential of YouTube.

Additionally, there is a lack of institutional support for integrating YouTube into teacher education. Colleges of Education in Nigeria often do not provide the necessary infrastructure or training for using digital tools in teaching practice (Okoro & Adeyemi, 2020). Without structured support, teacher-trainees are left to navigate the use of YouTube on their own, which limits its effectiveness as an educational resource.

In summary, while there is growing awareness of YouTube as a teaching tool among teacher-trainees in Nigeria, adoption remains limited due to challenges such as poor internet connectivity, high data costs, lack of digital literacy, and insufficient institutional support. Addressing these challenges is essential to ensure that teacher-trainees can effectively use YouTube to enhance their teaching skills and improve educational outcomes.

### *YouTube as Tools for Learning Languages*

Borhan (2024) argue that the translation is crucial for transferring information between languages. Traditionally, translators translated texts from source to target, while printed dictionaries provided meanings. Technology has significantly impacted translation, making it more efficient and accessible. Tia (2022) is of the opinion that YouTube video technology is among the most powerful instruments on the on the web, with over 1.311 billion clips. YouTube Video is a young entertainment portal. The technology of YouTube can be an educational instrument for presentations, research, and discovery. The utilization of

YouTube has had an advantageous impact on the enthusiasm of learners in all strata of the learning system, according to Rahman et al (2021) say no student's education is complete without the usage of technology in our contemporary era; teachers have specifically demonstrated that using audio blogging enhances the opportunity for students to practice speaking English in the classroom. Multimedia in teaching and learning has been proven to enhance students' performance, as evidenced by studies by Fleck et al. (2014) and Borko et al. (2008) and Zhang et al. (2011). The use of technology, such as YouTube, social media, helps students learn the English language by enabling them to recognise subjects linked to visuals. This method facilitates a more efficient learning process by assisting students in connecting their understanding of these areas with what they already know. According to Delyuzar and Parmawati (2019) view the platform of the YouTube as the largest engine for getting information quickly and it is the largest and most powerful video engine worldwide is YouTube. Students who utilise the website will find it simpler to obtain the knowledge they need to study.

According Delyuzar and Parmawati (2024) is of the views that students' grasp of grammar is improved by watching YouTube videos, especially when it comes to grasping the preposition of time. By facilitating conversations, offering clarifications, and offering examples, they help teachers gauge how well students have understood.

Abubakar et all (2023) identify the following as the merit of YouTube in teaching-learning process:

- a. Real object could be seen practically
- b. Visual learning: Seeing what is being taught in person helps learners understand their course material more fully.
- c. Communication with the world wide
- d. Centred learning it's an interactive tool that facilitates candid dialogues.
- e. Accessibility anywhere

#### *TAM as the Theory of the Research*

The Technology Acceptance Model (TAM), introduced by Davis in 1989, has undergone significant evolution to accommodate advancements in technology and changing user dynamics. Initially designed to explain the adoption of computer-related technologies based on perceived usefulness (PU) and perceived ease of use (PEU), TAM has since been extended with additional constructs like subjective norms, self-efficacy, and perceived enjoyment.

During the COVID-19 pandemic, TAM's relevance increased, particularly in higher education, where its constructs were applied to technologies like AI, virtual reality, and cloud computing. This evolution highlights its adaptability to new technological contexts and its growing importance in understanding user behavior across various domains, such as education and healthcare. Research gaps remain in exploring qualitative and mixed-method approaches and studying less-researched demographics like educators and support staff

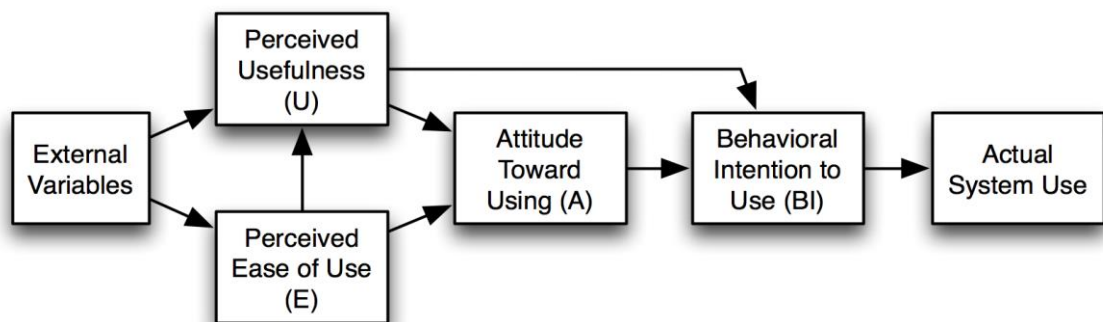
These findings emphasize TAM's continued utility and the necessity for on-going refinement to reflect technological and contextual advancements.

**Technology Acceptance Model (TAM)** The Technology Acceptance Model (TAM), introduced by Fred Davis in 1989, is a theoretical framework that explains how users come to accept and use technology. TAM posits that two primary factors determine technology acceptance: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). These factors influence the attitude towards using the technology, which subsequently affects the intention to use and actual usage behavior (Davis, 1989).

**Perceived Usefulness (PU)** the degree to which a person believes that using a particular system would enhance their job performance.

**Perceived Ease of Use: (PEOU).** The degree to which a person believes that using a particular system would be free from effort.

TAM suggests that the intention to use technology is influenced by users' positive perceptions about the technology's usefulness and its ease of use, leading to an increased likelihood of adoption and usage.



Adopted Device 1989

The diagram above represents the Technology Acceptance Model (TAM), a widely used theory to understand how users come to accept and use technology. The brief explanations of its key components are as follow:

- a) **External Variables:** These refer to any external factors that can influence a user's perception of the technology, such as social influence, training, and system characteristics.

- b) Perceived Ease of Use (E): This is the degree to which a person believes that using a technology would be free of effort. The easier the technology is to use, the more likely a user will accept it.
- c) Perceived Usefulness (U): This is the degree to which a person believes that using the technology will enhance their job performance or academic outcomes. The more useful the technology is perceived, the higher the likelihood of its adoption.
- d) Attitude Toward Using (A): This reflects a user's overall attitude (either positive or negative) towards using the technology based on the perceived usefulness and ease of use.
- e) Behavioural Intention to Use (BI): This refers to the likelihood that a person intends to use the technology. The intention to use is directly influenced by attitude and perceived usefulness.
- f) Actual System Use: This is the final outcome whether or not the technology is actually used. The more positive the attitude and the stronger the behavioral intention, the higher the likelihood of actual system use.

The model suggests that both *Perceived Usefulness* and *Perceived Ease of Use* directly influence *Attitude Toward Using*, which in turn affects the *Behavioral Intention to Use* the system. Ultimately, this leads to the *Actual System Use*. The model underscores the importance of making technology both useful and easy to use to encourage its adoption.

In the context of your research, TAM can be applied to understand how teacher trainees accept YouTube as a supplemental tool in education and how its perceived usefulness and ease of use influence their intention to use it, thereby improving their teaching methods and performance.

### *Relevance of TAM*

The Technology Acceptance Model is relevant to the study of teacher-trainees' awareness and perception of YouTube as a teaching resource in several ways:

#### 1. Understanding Technology Adoption Behavior:

TAM helps to explain why some teacher-trainees are more likely to adopt YouTube as a teaching resource. If the teacher-trainees perceive YouTube as being useful in enhancing their teaching skills (PU) and believe that it is easy to use without requiring significant technological effort (PEOU), they are more likely to adopt it as a part of their teaching practice (Okoro & Adeyemi, 2020).

#### 2. Assessing Perception and Influencing Factors:

The Perceived Usefulness of YouTube as a tool for accessing rich educational content, visualizing complex concepts, and observing model lessons directly relates to teacher-trainees' perception of its effectiveness in education. If trainees view

YouTube as adding value to their learning process and enhancing their ability to deliver effective lessons, they are more likely to have a positive attitude toward its adoption (Afolabi, 2021).

### 3. Ease of Use and Training:

The ease with which teacher-trainees can access and use YouTube influences their willingness to incorporate it into their teaching. Trainees who are comfortable navigating YouTube and finding educational content are more likely to perceive it as beneficial. Providing training and building digital literacy are essential for enhancing PEOU, thereby increasing adoption (Eze & Nwosu, 2018).

### 4. Attitude and Intention to Use:

Attitudes towards YouTube, shaped by PU and PEOU, directly influence the behavioural intention of teacher-trainees to use it in their teaching practice. Positive attitudes result from understanding how YouTube can simplify teaching tasks and improve engagement. Therefore, TAM is useful in identifying and explaining the drivers behind the adoption of YouTube technology as a teaching resource in Colleges of Education.

The Technology Acceptance Model (TAM) provides a robust theoretical framework for understanding how teacher-trainees' awareness and perception influence their adoption of YouTube as a teaching resource. By understanding factors like Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), teacher-training institutions can address the challenges of technology adoption more effectively. Improving awareness, providing training to enhance ease of use, and ensuring accessibility are key to encouraging the integration of YouTube into teacher training programs. Ultimately, using TAM as a guiding framework helps identify and address the factors that influence teacher trainees' decision to adopt YouTube as an educational tool.

### iii. Method

This study employs a descriptive survey design to examine teacher-trainees' awareness and perceptions of YouTube as a teaching resource in the North-West Geopolitical Zone of Nigerian colleges of education. A stratified random sample of 300 B.Ed and NCE teacher trainees is selected as the population of the study to ensure representation across demographics. Data is collected through a structured questionnaire, validated by experts, and tested for reliability using a pilot study. Mean and Standard Deviation were used to analyze the research questions, while t-test statistical tool was used to test the null hypotheses at 0.05 alpha level of significance.

**Research Question one:** Is there any difference in the mean performance of student teachers using YouTube as academic purpose?

**Table 1: Is there any difference in the means of performance of teacher trainees Performance on YouTube video as an academic purpose?**

Period	N	Mean score	Mean difference	STD
YouTube	2220	66.48378	<b>9.23507</b>	17.80005
After training	3942	70.24871		22.09836

### Summary of Table 1 Results

The study examines the impact of training on teacher trainees' performance using YouTube for academic purposes. The mean performance score improved from **66.48** during YouTube use to **70.25** after training, showing a positive effect. The standard deviation increased from **9.23** to **22.09**, indicating greater variability in trainee performance post-training.

There is a measurable improvement in the performance of teacher trainees when YouTube is used for academic purposes after receiving training. While the increase in the mean score is promising, the high standard deviation post-training indicates room for optimizing the



training process. This suggests that while training enhances average performance, its benefits may vary among trainees, highlighting the need for more tailored training methods to ensure consistent improvements across all participants.

**What is the difference in the mean scores of student teachers taught using traditional methods and those taught using YouTube as a supplemental tool?**

Period	N	Mean score	Mean difference	STD
Before YouTube	2607	52.58113		18.26759
After YouTube usage	3039	59.92938	5.34825	21.13034

The study compares student-teacher performance before and after using YouTube as a supplemental tool. The mean score improved significantly from **52.58** (traditional methods) to **59.93** (after YouTube usage), with a mean difference of **7.35 points**.

The standard deviation increased from **5.35** to **21.13**, indicating greater variability in performance post-YouTube use, likely due to differences in individual engagement and digital literacy. The introduction of YouTube as a supplemental teaching tool results in improved mean scores (7.35 points higher) compared to traditional methods. However, the increased variability in performance highlights the need for structured implementation and support to ensure consistent benefits for all learners.

Using YouTube as a supplemental tool enhances student-teacher performance compared to traditional methods, but its effectiveness depends on structured implementation to address variability in outcomes.

**Summary and Conclusion**

The study evaluates the effectiveness of YouTube as a tool for academic purposes, focusing on its impact on teacher trainees' performance both as a direct academic resource and as a supplemental teaching tool, in the colleges of education of Northwest zone of Nigeria

**Impact of Training with YouTube for Academic Purposes:**

The mean performance score improved from **66.48** to **70.25** after training, indicating that structured training enhances the use of YouTube for academic purposes.

The standard deviation increased from **9.23** to **22.09**, reflecting variability in how trainees benefitted from the training, emphasizing the need for tailored approaches to ensure consistency.

**YouTube as a Supplemental Teaching Tool vs. Traditional Methods:**

Mean scores rose from **52.58** (traditional methods) to **59.93** (YouTube use), with a notable improvement of **7.35 points**.

The standard deviation increased from **5.35** to **21.13**, suggesting diverse outcomes based on individual engagement and digital literacy.

Using YouTube for academic purposes significantly enhances teacher trainees' performance compared to traditional methods, particularly when supported by structured training. However, increased variability in outcomes post-training and YouTube adoption indicates a need for:

- 1) More comprehensive training tailored to diverse learner needs.
- 2) Support systems to address differences in digital literacy and engagement.

YouTube holds great potential as an academic and supplemental tool, offering accessible, engaging, and effective educational resources. To maximize its benefits, institutions should focus on structured implementation and equity in digital access and training.

## **Recommendations**

Based on the findings from the study on leveraging YouTube for teacher training and improving academic performance, the following recommendations are proposed:

**Structured Training Programs:** Implement comprehensive training for teacher trainees and educators on effectively utilizing YouTube as an academic resource. Focus on developing digital literacy and teaching strategies to maximize its impact. And offer continuous professional development sessions to keep educators updated on emerging technologies and pedagogical trends.

**Tailored Implementation:** Develop customized instructional models that integrate YouTube content into the curriculum, catering to diverse learning needs and preferences. Encourage active learning by incorporating YouTube videos into group discussions, assignments, and interactive activities.

**Digital Equity and Accessibility:** Ensure that all trainees have access to necessary devices and reliable internet to utilize YouTube and other digital tools effectively. Collaborate with stakeholders to address infrastructure gaps in underserved regions. And Monitoring and evaluation, establish feedback mechanisms to assess the effectiveness of YouTube-based learning. Use performance metrics and learner feedback to refine teaching approaches. And lecturers should use analytics from YouTube and Learning Management Systems (LMS) to track engagement and learning outcomes.

**The integration with traditional methods:** the combine YouTube-based instruction with traditional teaching methods to create a blended learning approach that leverages the strengths of both models.

Encourage educators and trainees to create localized, culturally relevant YouTube content that aligns with specific teaching objectives. And they should curate high-quality, credible YouTube resources tailored to the subject matter to ensure the reliability of information. By implementing these recommendations, educational institutions can optimize the use of YouTube as a tool for teacher training, enhancing both academic performance and teaching efficiency while promoting equity and innovation in education.

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## References

- Abubakar, H. (2024). The Application of YouTube Video on the Skill of Set Induction as Gateway for Effective Classroom Presentation in the Teaching-Learning Process: Classroom Presentation in the Teaching-Learning Process. *International Journal of Curriculum and Instruction*, 16(2), 464-479.
- Abubakar, H., & Muhammed, H. B. (2023). A systematic literature review on teaching teachers pedagogy through YouTube video technology. *Journal of Digital Educational Technology*, 3(1), ep2301. <https://doi.org/10.30935/jdet/12839>
- Adewuyi, H. O. (2024) The roles of Neighborhood Influence and Social Media on Secondary School Brutality: A correlational study. *International Journal of Curriculum and Instruction International Journal of Curriculum and Instruction*, (3).
- Adu-Marfo, A. O., Kwapong, O. A. T. F., Oheneba-Sakyi, Y., & Miller-Young, J. (2024). Understanding teachers' usage of YouTube as a pedagogical tool: A qualitative case study of basic school teachers in Ghana. *E-Learning and Digital Media*, 20427530241239393
- Afolabi, M. (2021). Technology Integration in Teacher Training: A Nigerian Perspective. *Journal of Educational Research and Practice*, 15(3), 134-147.
- Akanbi, S., & Popoola, T. (2019) Awareness and Use of Digital Tools in Teacher Education in Nigeria. *African Journal of Teacher Education*, 10(2), 89-103.
- Alhrahsheh, R., Owais, A., Alabidi, S., Alkhasawneh, T., & Momani, N. (2024). YouTube's impact on students' learning motivation: Assessing ease of use and usefulness. *International Journal of Instruction*, 17(2), 105-122.
- Almurashi, W. A. (2016). The effective use of YouTube videos for teaching English language in classrooms as supplementary material at Taibah University in Alula. *International Journal of English Language and Linguistics Research*, 4(3), 32-47.
- Borhan, M. M. (2024). The Impact of Technology and Its Help in Finding Equivalent in Academic Translation: Impact of Technology in Academic Translation. *International Journal of Curriculum and Instruction*, 16(3), 560-569.
- Boonmoh, A., Jumpakate, T., & Karpklon, S. (2021). Teachers' perceptions and experience in using technology for the classroom. *Computer-Assisted Language Learning Electronic Journal*, 22(1), 1-24
- Brown, L., & Smith, J. (2017). YouTube in the Classroom: Educational Potential and Challenges. *International Journal of Media and Learning*, 22(4), 112-126.
- Derakhshan, A., Lee, L., Bhama, P., Barbarite, E., & Shaye, D. (2019). Assessing the educational quality of 'YouTube'videos for facelifts. *American journal of otolaryngology*, 40(2), 156-159. <https://doi.org/10.1016/j.amjoto.2019.01.001>
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340

- Delyuzar, H. S., & Parmawati, a. (2024). The Effectiveness of YouTube Video to Improve Students 'Grammar Ability. *Project (Professional Journal of Eenglish Education)*, 7(2), 286-291
- Eze, C., & Nwosu, I. (2018). Digital Tools in Teacher Education: Transforming Learning in Africa. *Educational Technology & Society*, 21(1), 98-109.
- Garcia, M., & Kumar, S. (2021). Impact of Video-Based Learning on Academic Performance of Teacher Trainees. *Journal of Teacher Education*, 18(2), 89-105.
- Gracella, J., & Nur, D. R. (2020). Students' Perception of English Learning through YouTube Application. *Borneo Educational Journal (Borju)*, 2(1), 20-35.
- Gayretli, Ş. (2023). Examining the Views of Trainers and Trainees on the Effectiveness of Online Youtube Guitar Training. *Journal for the Education of Gifted Young Scientists*, 11(1), 75-89.
- Guillén-Gámez, F. D., Colomo-Magaña, E., Ruiz-Palmero, J., & Tomczyk, Ł. (2024). Teaching digital competence in the use of YouTube and its incidental factors: Development of an instrument based on the UTAUT model from a higher order PLS-SEM approach. *British Journal of Educational Technology*, 55(1), 340-362.
- Kalburgi, N. K., David, A., & Muralidhar, L. B. (2023). Understanding the Perceptions of Students towards YouTube as a Learning Tool-An Empirical Approach. *Central European Management Journal, ISSN*, 2336-2693.
- Kasim, u., & Fitriani. S. (2024). The Use of YouTube Videos to Improve Students Ability in Writing Explanation Text. *Eltin Journal: Journal of English Language Teaching in Indonesia*, 12(1), 22-33.
- Kim, R., Park, H. Y., Kim, H. J., Kim, A., Jang, M. H., & Jeon, B. (2017). Dry facts are not always inviting: a content analysis of Korean videos regarding Parkinson's disease on YouTube. *Journal of Clinical Neuroscience*, 46, 167-170. <https://doi.org/10.1016/j.jocn.2017.09.001>
- Mady, M. A., & Baadel, S. (2020). Technology-Enabled Learning (TEL): YouTube as a ubiquitous learning aid. *Journal of Information & Knowledge Management*, 19(01), 2040007.
- Moghavvemi, S., Sulaiman, A., Jaafar, N. I., & Kasem, N. (2018). Social media as a complementary learning tool for teaching and learning: The case of youtube. *The International journal of management education*, 16(1), 37-42. <https://doi.org/10.1016/j.ijme.2017.12.001>
- Martin, H., & Ahmed, R. (2021). Challenges in Using YouTube for Educational Purposes: A Case of Teacher Trainees in Low-Income Regions. *Education Technology & Society*, 24(3), 167-180.
- Mayer, R. E. (2019). How multimedia can improve learning and instruction. *Impact (2514-6955)*

- Nacak, A., Bağlama, B., & Demir, B. (2020). Teacher Candidate Views on the use of YouTube for Educational Purposes. *Online Journal of Communication and Media Technologies*, 10(2), e202003
- O’Flaherty, J., Lenihan, R., Young, A. M., & McCormack, O. (2023). Developing micro-teaching with a focus on core practices: the use of approximations of practice. *Education Sciences*, 14(1), 35
- Okoro, K., & Adeyemi, L. (2020). Exploring the Use of YouTube as a Teaching Aid in Nigerian Teacher Education . *Nigerian Journal of Educational Studies*, 18(2), 45-58.
- Rahman, H., Sakkir, G., & Khalik, S. (2021). Audio-Lingual Method to Improve Students’s Speaking Skill at Smp Negeri 1 Baranti. *La Ogi: English Language Journal*, 7(1), 31-40.
- Rouhi, A. D., Roberson, J. L., Kindall, E., Ghanem, Y. K., William, S. Y., Williams, N. N., & Dumon, K. R. (2023). Assessment of YouTube as an online educational tool in teaching laparoscopic Roux-en-Y gastric bypass: A LAP-VEGaS study. *Surgery in Practice and Science*, 14, 100199.
- Sakkir, G., & Dollah, S. (2019). Measuring students’ writing skills using Facebook group application in EFL context. *International Journal of Humanities and Innovation (IJHI)*, 2(3).
- Sakkir, G., Dollah, S., & Ahmad, J. (2020). Students’ Perceptions Toward Using YouTube in EFL Classrooms. *Journal of Applied Science, Engineering, Technology, and Education*, 2(1).
- Sarid, M., Peled, Y., & Vaknin-Nusbaum, V. (2021). The relationship between second language college students’ perceptions of online feedback on draft-writing and academic procrastination. *Reading and Writing*, 34(5), 1247-1271.
- Smith, A., & Green, K. (2022). Self-Reflection Through Video Technology in Teacher Training *International Journal of Teacher Development*, 29(1), 55-72.
- Smith, J., & Taylor, R. (2018). YouTube and Its Potential in Teacher Education: A Review. *Journal of Media in Education*, 25(3), 145-159
- Taylor, M., & Scott, D. (2020) Digital Literacy and the Role of Educational Technology in Teacher Training. *Educational Practice & Research*, 33(2), 77-88.
- Tahmina, T. (2023). Students’ perception of the use of YouTube in English language learning. *Journal of Languages and Language Teaching*, 11(1), 151-159.
- Toto, G. A., & Limone, P. (2021). From resistance to digital technologies in the context of the reaction to distance learning in the school context during COVID-19. *Education Sciences*, 11(4), 163.
- Taghizadeh, M., & Hasani Yourdshahi, Z. (2020). Integrating technology into young learners' classes: language teachers' perceptions. *Computer Assisted Language Learning*, 33(8), 982-1006.
- Taylor, M., & Scott, D. (2020). Digital Literacy and the Role of Educational Technology in Teacher Training. *Educational Practice & Research*, 33(2), 77-88.

- Zaidi, A., Awaludin, F. A., Karim, R. A., Ghani, N. F. C., Rani, M. S. A., & Ibrahim, N. (2018). University students' perceptions of YouTube usage in (ESL) classrooms. *International journal of academic research in business and social sciences*, 8(1), 541-553
- Zhou, Q., Lee, C. S., Sin, S. C. J., Lin, S., Hu, H., & Fahmi Firdaus Bin Ismail, M. (2020). Understanding the use of YouTube as a learning resource: A social cognitive perspective. *Aslib Journal of Information Management*, 72(3), 339–359. <https://doi.org/10.1108/AJIM-10-2019-0290>
- Uche, P., & Ibrahim, A. (2020). Barriers to Using Online Resources in Nigerian Colleges of Education *Journal of Digital Learning*, 14(2), 100-113.
- Williams, C., Thompson, P., & Lewis, R. (2020). The Impact of YouTube on Micro-Teaching Skills of Teacher Trainees. *Journal of Innovative Education*, 30(1), 100-120.