

Integrating YouTube as a Pedagogical Tool to Enhance Research Writing Skills in an Initial Teacher Education Program in a Compressive University, Eastern Cape, South Africa

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Abstract

YouTube is a rich source of authentic materials on a vast number of topics and language varieties and can be used to help students develop their research writing skills. This paper aims at examining how YouTube can be incorporated in teacher education to help students improve their academic writing. Technological Pedagogical Content Knowledge (TPACK) Framework was selected to understand the intersection of content knowledge (research writing), pedagogical knowledge (teaching strategies), and technological knowledge (YouTube as a tool). This theory was employed to understand how teachers integrate YouTube into their teaching practices and how it supports the enhancement of research writing skills, considering the pedagogical strategies and content that aligns with the use of YouTube. A quantitative research approach was conducted, and the population of the study consisted of 289 fourth year student teachers from the Faculty of Education in 2023. Seventy-one participants completed the questionnaire through Google Forms and data was analysed using Stata version 18. The results show that YouTube is a useful technique for improving research writing skills among student teachers. However, constraints such as lack of access to devices and stable internet connections are some of the limitations of this technique. Although there are these barriers, the study shows a very high willingness of student educators to use YouTube for academic purposes. Thus, to enhance the application of YouTube in teacher training programmes, infrastructure and technological issues must be addressed, and specific strategies developed.

Keywords

YouTube, Integration, Research Writing

INTRODUCTION

Recent studies have investigated the integration of YouTube as a pedagogical tool to improve writing skills in different educational settings. The research concludes that the use of YouTube videos is beneficial for students' writing performance in academic settings and, in general, promotes innovation, playfulness, and stimulation (Olasina 2017). The platform provides realia for language input and cultural exposure especially relevant for the tertiary level learners who are learning how to write (Trang 2022). Teachers have revealed a very high tendency to use YouTube videos to teach narrative writing (Antony & Khalid 2024). The potential of YouTube is not limited to the exposure to spoken English; it can be used as a source of authentic texts on a variety of topics and language varieties (Mayora 2009). These studies indicate that the integration of YouTube in writing teaching and learning can boost learner autonomy, provide real-life writing tasks, and solve the problems identified both for native English speakers and EFL learners in the development of their writing skills.

Over the years there has been a shift in the global social landscape because of advancement in communication technology. One particular information technology has made it possible to use YouTube as a tool for teaching research skills (Lewis, Popov and Fatima 2024). In the current world, the role of YouTube in educating research skills is changing with the advancement in technology, depending on how educators embrace innovations. This is important as it helps understand how to enhance the research learning process. Deori Kumar and Verma (2023) argue that YouTube is a platform where users are able to post, share and view videos which can help enhance the learning process. Esparza and Aguilar (2023) argue that the effectiveness of using YouTube in teaching research writing may be better than in other settings. Bernad and Valeiras (2023) note that YouTube has numerous examples of real life research writing techniques

that may be difficult to illustrate through other learning methods. In addition, YouTube can be incorporated in the classroom to include the use of blogs in learning processes. This makes it possible for the teachers to give assignments, communicate with the students and even assess them on their research writing skills correctly (Jin, 2023).

YouTube does not only offer texts and other written materials. It also comprises of unique cultural elements; In academic writing, Giglietto, Rossi and Bennato (2012) have highlighted the application of research writing skills in real life situations such as constructing research queries, declaring goals and choosing methodologies. Gross et al. (2023) have firmly established in their study that the use of YouTube as a platform has advantages in exposing research learners to different aspects of the literature review and theoretical frameworks. The study also reveals another way of learning with YouTube: the Minimizing the pressure of time and distance, the participants in this study were given the opportunity to develop autonomy and independence in their learning processes by using the vast content of the platform. The ability to choose a variety of content on YouTube helps the learners improve their understanding of the literature review and complex theoretical concepts, while at the same time, the learners are in charge of their learning process, especially for self-directed learners who can learn at their own pace. This way, the feeling of expertise and power is gained, and a person can interact with the views and increase his or her effectiveness in the areas of interest. This study finds that YouTube is a resource that is changing the way learning is done for research students in the contemporary world.

Furthermore, YouTube has numerous advantages that can enhance the learning process and research skills and processes, which are readily available for free, therefore increasing the accessibility of the material for the learners (Khan, Saeed, Anwar, and Kanwal, 2023). The uniqueness of the YouTube platform makes it possible to use different and creative ways of teaching and learning through videos. The use of YouTube in education is not new but the use of YouTube to enhance research skills is the gap that the paper aim to bridge. The aim of this study is to examine how YouTube can be used to enhance teachers' research writing skills. The research will answer the following research question: How can YouTube be integrated into teacher education programs to enhance research writing skills? To what extent does the use of YouTube videos improve the quality of research writing among student teachers?

LITERATURE REVIEW

The Technological Pedagogical Content Knowledge (TPACK) framework is a complex model that aims to help teachers integrate technology effectively in the classroom by incorporating knowledge of technology, pedagogy and subject content (Schmidt et al., 2009). It expands on Shulman's idea of pedagogical content knowledge, while focusing on the interrelationship of these three knowledge areas (Niess, 2016). In order to implement TPACK effectively, teachers must have a flexible knowledge base that is dynamic and evolving as new technologies emerge (Niess, 2016; Schmidt et al., 2009). Teachers have been found to incorporate technology at different rates and in different ways, including applying it to explain concepts, to engage students, to provide a means of experimental learning, to determine work, and to communicate (Stoilescu, 2015). The framework has been found to be helpful in explaining the decision-making process of teacher candidates in integrating technology into their teaching, and the results of the studies revealed the increase of the content-specific and general pedagogical knowledge rationales (Graham et al., 2012).

Utilising YouTube Videos in Research Classrooms

YouTube videos have become an invaluable resource in the teaching and learning of research skills especially in information literacy and language learning. It has been proved that YouTube can teach information literacy effectively than other methods (Shaheen Majid et al., 2012). YouTube videos are used in EFL contexts to enhance language learning aspects such as listening, reading, speaking, and writing and also to enhance students' motivation and enthusiasm as found by Audina et al. (2023). Moreover, the potential of YouTube can be felt in problem solving coe learning that helps to expose the learner to a variety of learning resources that promote critical and creative thinking. The literature reveals that the employment of YouTube in learning environments improves concept understanding, learning problem identification and analysis, and real-time idea generation and sharing due to interactive features (Kurniawan et al., 2024). These findings therefore show that YouTube is a viable and poten al learning tool across different educational contexts.

Candel and Yuste (2023) emphasize the benefits of using YouTube videos in education classes to enhance student engagement and improve research writing skills (Zhang and Hyland 2022). By incorporating video content instructors can create a dynamic learning environment that caters to learners preferences. Zulaefa and Rizal (2023) also highlight YouTubes potential, as a resource for educators seeking to enhance lesson effectiveness. With its range of materials and user friendly features YouTube is a useful tool for educators aiming to design engaging learning experiences. This reflects the increasing importance of platforms and multimedia content in teaching methods.

It is essential as emphasized by Simbolon and Febrianti (2020) to carefully select content when integrating YouTube videos into classroom instruction. Aligning the videos with lesson objectives ensuring they are suitable for the students age group and reinforcing learning goals can significantly enhance their value. This approach promotes engagement, among students conducting research while providing them with material that supports their development.

YouTube, as a Tool for Improving Research Writing Skills

According to Basoglu (2017) YouTube is highlighted as a resource for enhancing students understanding of research writing emphasizing how the platform can aid in developing this crucial academic skill. The wide accessibility of YouTube offering videos, tutorials and explanations proves beneficial for students looking to enhance their research

writing proficiency (Maziriri, Gapa and Chuchu 2020). By combining visual and auditory learning techniques YouTube caters to learning preferences and styles (Cabual, 2021) aligning with the trend of platforms playing a significant role in modern education by providing new ways to support traditional learning methods. Haleem, Javaid, Qadri and Suman (2022) recognize the growing significance of platforms in educational environments and acknowledge their essential role in introducing innovative approaches to complement conventional teaching practices. The incorporation of tools, into education offers opportunities to create engaging and interactive learning settings that can benefit students overall learning experience (Haleem, Javaid, Qadri and Suman, 2022).

Incorporating methods shows the shift, towards technology driven and interactive learning. Teaching research writing through YouTube videos enhances student engagement as highlighted by Muthmainnah (2023) who emphasizes that visual content on YouTube can greatly improve the learning experience making it more interesting and memorable for students. This viewpoint is consistent with Halwanis (2017) argument that visual aids and multimedia resources like those found on YouTube can enhance understanding, retention and overall participation in settings. Visual materials on platforms such as YouTube can simplify topics like research writing aiding students in grasping and remembering information.

Moreover accommodating learning styles is key to fostering student involvement in research writing. Caratiquit (2022) proposes that YouTubes multimedia approach, incorporating both auditory components caters to learning preferences. This inclusivity broadens the accessibility of materials to an audience of learners potentially enhancing their comprehension and engagement, with the content (Lapum et al., 2022). When evaluating the impact and effectiveness of YouTube, in settings it's important to consider how it aligns with learner centered teaching principles and accessibility in education. According to Maziriri et al. (2020) YouTube channels offer step by step tutorials on aspects of research writing covering everything from structuring papers to accurately citing sources. Haleem et al. (2022) note that these tutorials serve as a resource for students of all skill levels. Halwani (2017) also appreciates the tutorials that focus on aspects of research writing, such as organizing papers and citing sources correctly.

Candel and Yuste (2023) argue that real world examples play a role in engaging students pointing out that YouTube allows for showcasing instances of research papers and writing techniques in contexts across various fields. Scholars, like Basoglu (2017) Zhang and Hyland (2022) as Zulaefa and Rizal (2023) recognize YouTubes ability to present authentic examples of research papers and writing styles as an invaluable educational tool.

Engaging with YouTube videos, for interactive learning encourages student participation through comments and discussions creating a sense of community among learners (Lapum et al., 2022). Khan et al. (2023) highlight the impact of YouTubes features like comments and discussions on student engagement. They argue that students can actively engage in discussions related to the video content they watch.

According to Deori et al. (2023) YouTube complements teaching materials by providing resources and support for classroom instruction. It enables students to explore topics access examples and practice exercises to enhance their learning experience (Muthmainnah, 2023). Moreover YouTube can visually reinforce concepts taught in textbooks and lectures (Saed et al., 2021). Researchers note that students often find it easier to understand subjects when they are visually presented or demonstrated.

YouTube offers accessibility with educational channels offering free content (Esparza and Aguilar 2023). Haleem et al. (2022) propose that this accessibility lowers barriers for both educators and students. Current studies indicate that as an platform with various educational channels providing supplementary material YouTube significantly diminishes obstacles, for teachers and students alike.

Students have the convenience of watching YouTube videos whenever they want which helps them continue learning after class (Simbolon and Febrianti 2020). Cabual (2021) points out how flexible YouTube is, letting students view videos at their pace. The researcher suggests that this feature of YouTube supports learning outside classroom hours.

METHODOLOGY

Design and Participants

The current study aims to explore the effectiveness of integrating YouTube videos in a teacher training program to enhance the development of research writing skills. The study was conducted on the 2023 cohort of 289 fourth-year student teachers who were implementing research projects in the Faculty of education. Out of this group, a random sample of 79 participants was chosen to complete a questionnaire using Google Forms. The study employed a descriptive research method which is explained by Remler and Van Ryzin (2021) as the method of choosing and presenting data with no attempt to make cause and effect or prediction.

Data Analysis and Results

Table 1 Level of YouTube Usage for Learning Basic Research Skills Content (N = 69)

Level of YouTube Usage	Frequency (N)	Percentage (%)
Don't use at all	5	7.4%
Entertainment	6	8.8%
Finding Inspiration	11	16.2%
Personal Growth	7	10.3%
Productive, clearer, and easy to comprehend	1	1.5%
Visual and interactive learning	38	55.9%

The data in Table 1 illustrates the various ways student teachers utilize YouTube for learning accounting education content. The majority of participants (55.9%) reported using YouTube for visual and interactive learning, indicating that students find multimedia-based instruction beneficial for understanding accounting concepts. This aligns with existing research that emphasizes the effectiveness of video-based learning in improving comprehension and engagement. A significant portion of students (16.2%) stated that they use YouTube for finding inspiration, suggesting that the platform serves as a motivational tool by exposing learners to real-world applications and diverse teaching styles. Meanwhile, **10.3% use** YouTube for personal growth, showing that some students leverage the platform beyond academic purposes to enhance their broader skill sets. However, a small percentage of students (7.4%) reported that they do not use YouTube at all for learning accounting, which may indicate limited access to technology, personal learning preferences, or a lack of awareness about educational resources on the platform. Additionally, 8.8% use YouTube for entertainment, highlighting a mix of both academic and non-academic engagement. Only 1.5% of students indicated that YouTube makes accounting content more productive, clearer, and easier to comprehend, which suggests that while many students engage with the platform, fewer perceive a direct improvement in their comprehension.

Table 2 Time spent on YouTube for learning research skills content per week, showing the frequency and percentage for each category

	Time Spent Weekly	Frequency	Percentage
1	1 to 2 hours	35	50.7
2	2 to 4 hours	15	21.7
3	Whenever I have time	1	1.4
4	No hours at all	18	26.1

Table 2 provides insight into how much time respondents spend weekly on YouTube for learning research skills content. Overall, the data suggests that the majority of users who do engage with YouTube for this purpose, tend to invest at least 1 hour a week, with the most common duration being 1 to 2 hours. However, a significant segment does not use YouTube at all for learning research skills content, which could point to alternative habits or preferences.

Table 3 Availability of YouTube-enabled lecture rooms

Number of Lecture Rooms	Frequency	Percentage
0	24	37.5
1 - 2	28	43.8
3 - 4	11	17.2
Not certain	1	1.6

Table 3 above provides insights into the distribution of lecture rooms that are enabled with YouTube for educational purposes. Overall, the majority of respondents have access to some YouTube-enabled lecture rooms, with the most common configuration being between 1 and 2 rooms. However, nearly 38% report having no such rooms, which may indicate potential areas for technical or infrastructural improvements.

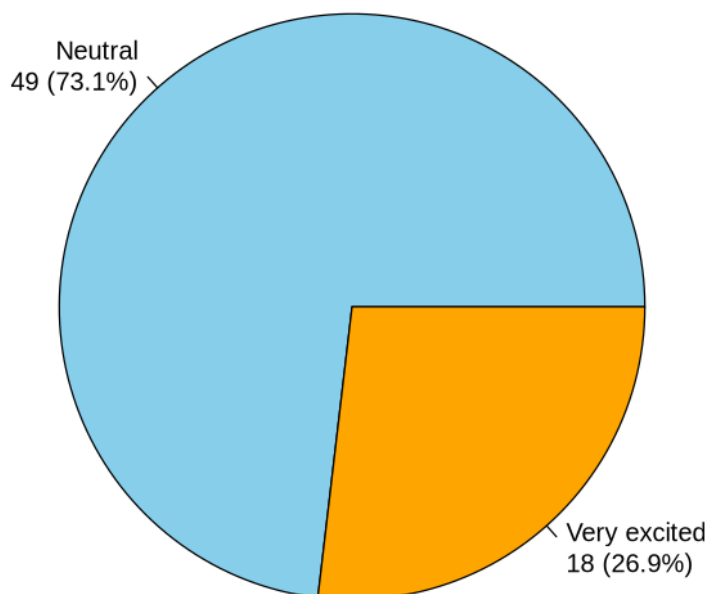


Fig. 1 Student perceptions of YouTube integration in face to face learning

Fig. 1 Pie chart showing the student perception of YouTube integration in face-to-face learning. The visual representation shows that while about a quarter of students are very excited about incorporating YouTube into their face-to-face learning experience, the majority maintain a neutral stance on this integration.

DISCUSSIONS

Usage for learning in learning basic research skills

YouTube is widely used for interactive and visual learning in learning research skills. A portion of students rely on YouTube for motivation and personal growth beyond coursework. Some students do not use YouTube at all, potentially due to accessibility challenges or learning preferences. While many engage with YouTube, only a small percentage explicitly recognize its role in making content clearer and easier to understand.

When it comes to using YouTube for school-related work, 47.8% of the students spend 1-2 hours, and 37.7% spend 2-3 hours. This showcases YouTube as a significant tool for school-related research and learning, with students dedicating substantial time to it.

Lecturers' Use of YouTube and Screencast, and Feedback

The data reveals that 49.3% of lecturers often use YouTube during lessons to reinforce content, and a significant 88.2% of students believe that using Screencast makes the lesson more interesting. This highlights the perceived value of integrating video content and Screencast in enhancing lesson delivery and engagement. A high percentage (94.1%) of students receive feedback from their lecturer regarding class assignments or tasks, indicating active engagement and communication between lecturers and students. YouTube is predominantly used for visual and auditory learning aids (39.7%) and as supplementary learning material (11.8%), emphasizing its role in supporting diverse learning needs.

Access to Technology and Advantages of YouTube

Access to technology for YouTube learning varies among students, with a significant number having at least sometimes access (39.7%). The advantages of YouTube identified include a vast content library and visual and engaging learning, with 55.2% recognizing all listed advantages, indicating the broad utility of YouTube in the research journey.

The survey results underline the integral role of YouTube in facilitating visual and interactive learning among students in an initial teacher education program at a rural university in South Africa. The high utilization of YouTube for visual and interactive learning points towards the platform's effectiveness in engaging students and enhancing their understanding of complex subjects, such as accounting.

However, the limited facilities for YouTube in lecturer rooms and the neutral perception of its integration into classroom learning suggest areas for improvement. Enhancing infrastructure to support YouTube usage in classrooms and developing strategies to more effectively integrate YouTube into teaching methodologies could further enhance its educational impact.

The strong positive response towards Screencast and the significant time dedicated to YouTube for school-related work highlight the potential of video content in making lessons more interesting and supporting students' learning journeys. Furthermore, the wide acknowledgment of YouTube's advantages, including its vast content library and flexibility, underscores its value as a supplementary learning resource. These findings highlight the importance of integrating YouTube effectively into basic research skills, ensuring accessibility and structured content that enhances comprehension.

Further research could explore barriers to YouTube usage and strategies to maximize its benefits in teacher training programs. To maximize the educational benefits of YouTube, it is recommended that educational institutions:

- Enhance infrastructure to support YouTube and video content integration in all learning environments.
- Develop targeted training for both students and educators on finding and utilizing high-quality educational content on YouTube.
- Encourage the use of YouTube as a supplementary tool for diverse learning styles, providing visual, auditory, and interactive resources to cater to individual student needs.
- Foster an environment that promotes interactive discussions and feedback on YouTube-based assignments, enhancing the learning experience and understanding.

CONCLUSION

This study's findings show that YouTube is an important digital resource that can improve teaching and learning within an initial teacher education program at a South African university. Most students used YouTube for learning in a social way and preferably for research. This shows the effectiveness of the platform in the comprehension of complex contents for instance in accounting education due to the availability of different forms of learning materials. In terms of engagement, YouTube is viewed positively; however, one fourth of the students were excited about its integration in face-to-face learning; however, students' response was neutral. The advantages of using YouTube can be seen in the recognition of the advantages of using YouTube, namely the availability of a vast amount of content and the potential to meet the needs of different learning styles, which shows that YouTube can be a useful tool in education. Nevertheless, increasing the infrastructure and offering clear directions on how to find and apply YouTube videos for learning can greatly improve its effectiveness.

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