Impact of YouTube as an Academic Learning Resource for Students: An E-Learning Theory Perspective

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Abstract: The student habit of using the digital platforms can be used to compliment the traditional learning methods. Specifically, designed digital learning platform can support the learning with convenience of time, place, and pace. They can increase the engagement of students and produce higher learning outcomes with increased satisfaction and competence. This study aimed to explore the impact of YouTube as an online resource for academics and learning purpose of students. To fulfill the objective of the study, we conducted 12 semi-structured interviews, and employed thematic analysis procedure to analyze the data. Based on the framework of e-learning theory, we explored the impact of online YouTube based lectures on the academics of students. Moreover, in our empirical examination based on in-depth interviews, we found that the convenience provided by the platform and the expertise of content providers on YouTube help students solve their problems and meet their required goals of academics and learning. To conclude this study, the implications of these findings are discussed in detail.

Keywords: YouTube; YouTube for academia; e-learning theory; YouTube for learning

Abstrak: Kebiasaan siswa menggunakan *platform* digital dapat digunakan untuk melengkapi metode pembelajaran tradisional. Secara khusus, platform pembelajaran digital yang dirancang dapat mendukung pembelajaran dengan kenyamanan waktu, tempat, dan kecepatan. Mereka dapat meningkatkan keterlibatan siswa dan menghasilkan hasil belajar yang lebih tinggi dengan peningkatan kepuasan dan kompetensi. Penelitian ini bertujuan untuk mengeksplorasi dampak YouTube sebagai sumber daya *online* untuk tujuan akademik dan pembelajaran siswa. Sebagai objektif penelitian, kami melakukan 12 wawancara semi-terstruktur, dan menggunakan prosedur analisis tematik untuk analisis data. Berdasarkan kerangka teori *e-learning*, kami mengeksplorasi dampak kuliah *online* berbasis YouTube terhadap mahasiswa. Selain itu, dalam pemeriksaan empiris kami berdasarkan wawancara yang lebih mendalam, kami menemukan bahwa kemudahan yang diberikan oleh *platform* dan keahlian penyedia konten di YouTube membantu siswa memecahkan masalah mereka dan memenuhi tujuan akademik dan pembelajaran yang mereka butuhkan. Untuk menyimpulkan penelitian ini, implikasi dari temuan ini dibahas secara rinci.

Kata Kunci: YouTube; YouTube untuk akademisi; teori e-learning; YouTube untuk pembelajaran

INTRODUCTION

Online education has become an integral part of higher education in recent years (Kim et al., 2014). The primary reason for this trend is because the online environment gives students the flexibility to access course content whenever and whenever they choose. Indeed, the predominance of social technologies has prepared the way for new online venues where users can begin and engage in self-directed learning. Particularly, Schroeder et al. (2010) emphasised the benefits of social technologies in higher education in terms of providing a flexible learning environment. In particular, social technologies are empowering because they give learners autonomy and choice over what and how to learn on their own (Hong et al., 2016).

People born in or after 1985 are digital natives who have learned how to access academic and nonacademic content on a number of platforms (Duvenger & Steffes, 2012). Buzzetto-More (2013) recognised a generation of hyper-connected learners who value web-based tools in the knowledgegathering process and favour user-generated content (Jones & Shao, 2011). According to study, today's kids are more technologically focused and motivated than those of the pre-information era (McCormick et al, 2010). Particularly, social media is used to engage with the greater community and has become a popular educational tool that students employ for academic goals.

Video-sharing programmes and websites are currently one of the most widely used forms of social media in the worldwide education system (Hong et al., 2016). In particular, YouTube is no longer merely a venue for offering entertainment. Many universities, such as Stanford University, have put their course lectures to the Internet, making it a source of education. In addition to uploading and viewing video clips, YouTube offers a multitude of additional functions. Viewers are able to submit comments and "like" or "dislike" a video. Advanced social networking features include the capability to build user profiles (channels) and invite friends to join them. Consequently, learners have access to YouTube's millions of educational video clips and may discover lessons in virtually every subject area (e.g., computer programming, dancing, drawing, playing musical instruments, applying makeup and others). Essentially, anyone can create instructional videos to teach others a skill at which he or she excels. YouTube has become a significant resource where students may see millions of instructional videos and share their ideas, feelings, and experiences with anybody, at any time.

Despite the abundance of literature on the use of technologies to promote learning, the vast majority of research to date has focused on formal learning contexts in which the use of a tool was mandated by the course teacher (Kim et al., 2014; Zhou et al., 2017). Limited research has been conducted on the use of social media platforms, particularly YouTube. Through the lens of e-learning theory, the current research is pertinent as it seeks to comprehend the impact of YouTube as an academic learning resource for students.

The study has made numerous contributions to the literature by expanding our understanding of elearning methods. It will also help practitioners understand how to create policies that will allow them to take better advantage of YouTube for e-learning. In our empirical study based on in-depth interviews, we discovered that the platform's convenience and the skill of content producers on YouTube assist students overcome challenges and accomplish their academic and learning goals.

The aim of this research was to explore the impact of the YouTube platform on the academic use of students and their learning. Because the targeted context has received little attention in the literature and developing countries are attempting to adapt and implement state-of-the-art approaches in higher education institutions. As a result, this study determined that the qualitative approach was the best option for investigating the underpinnings of e-learning practices and gaining more advantages from online mediums (specifically YouTube) in e-learning. The specific objectives of this study are to determine:

1. To explore the impact of YouTube as an online resource for students, and

2. To study the impact of YouTube on learning of students and their academic performance

LITERATURE REVIEW

E-Learning Theory

Multimedia learning is a specific idea of e-learning theory, which asserts that deeper learning can be facilitated by using audio, visual, and textual modalities as opposed to one (Mayer et al., 2015). Previous research pertinent to the philosophy of e-learning has demonstrated that multimedia design principles can facilitate successful learning (Mayer & Moreno, 2003; Moreno & Mayer, 2007). E-learning theory also includes ideas that may be included into instructional design; these principles explain "how educational technology can be used and adapted to support effective learning" (Wang, 2012).

E-learning theory is grounded in cognitive science principles that demonstrate how to utilise and create educational technologies to enhance learning effectiveness. Sweller and Moreno (2015) developed design principles for learners who use technology to reduce superfluous cognitive load and to handle innate constraints. As a subset of Connectivism, e-learning theory stresses the use and design of technologies to generate new learning opportunities in order to encourage successful learning. In addition, the theory is appropriate to this research since it emphasises regulating external cognitive and

internal burdens to enhance learning efficiency. Also discussed is the significance of connectivism in technologies that promote successful learning.

YouTube as a Learning Platform

YouTube, which debuted in 2005, is the most popular video-sharing website, with more than 800 million unique monthly visitors. YouTube is also widely used as a social networking platform where videos can be shared, rated, and commented on. It is anticipated that shared web video will play an increasingly important role in education (Bonk, 2011). YouTube can be utilised to distribute educational content since it enables collaborative content development and peer evaluation, which enhances the social learning experience (Duffy, 2008). Additionally, the usage of video for educational purposes provides advantages over text and static visuals. Specifically, Berk (2009) stated that video technology is an effective mode of instruction because it offers students with the same material via many learning modalities. YouTube has therefore been identified as an effective medium for supporting procedural learning (Lee and Lehto, 2013) and is a promising tool for supporting learning (Balakrishnan et al., 2015). In addition, the concept of channel subscriptions encourages active learning by notifying users when new content is added. YouTube's "Education" category contains channels connected to university courses and other forms of educational programming. In addition, YouTube was created with viewing and upvoting indexes (Chelaru et al., 2014) that assist the search for video material. In conclusion, autocaptioning and translation of YouTube videos have significantly broadened their accessibility to a much larger audience (O'Neil, 2011).

The research indicates that the use of YouTube by academics has attracted considerable attention, notably in the medical profession (Clifton & Mann, 2011). Using YouTube has also been demonstrated to improve the quality of online courses (Jones & Graham, 2013). According to Berk (2009), Logan (2012), and other sources, YouTube has proven to be an excellent aid in online tutoring classes, since it promotes independent study, enhances lectures, and aids in tutoring courses (Miller, 2009). Tan and Pearce (2011) found that incorporating YouTube videos into the learning and teaching of an introductory sociology course for senior and international students in the United Kingdom was an effective strategy for promoting student learning. Based on case studies and student artefacts, the authors predicted that YouTube facilitates student learning through the presentation of alternative perspectives and opinions on subjects, variation in delivery styles, and the use of everyday examples to teach concepts. In addition, Tan and Pearce (2011) evaluated the usage of YouTube videos in a ten-week introductory sociology course at the Foundation Centre of Durham University. They discovered that students in the course viewed YouTube as a valid and useful method for assisting and enhancing their learning, especially when used to combine more explanation and so benefit from the lecturer's complete and additional experience. In addition, Watkins and Wilkins (2011) concluded in their study entitled "Utilizing YouTube in the EFL Classroom" that using YouTube within and outside of the classroom can enhance the ability to speak, listen, and pronounce. In addition, the study discovered that YouTube videos might enhance cultural lectures, introduce pupils to World English, and facilitate the development of real vocabulary. The potential for YouTube to transform education in the classroom has been identified as a significant research topic (Watkins & Wilkins, 2011).

Indeed, social media platforms such as YouTube give individuals who have consumed material (i.e., content consumers) the flexibility to engage with others as well as generate and spread information, so allowing them to simultaneously become content producers (Pauwels & Hellriegel, 2009).

Our aim in this study is to explore the impact of the YouTube platform on the academic use of students. Specifically, we address this research question: What is the impact of YouTube in student's academics and learning?

RESEARCH METHODOLOGY

This study employed a qualitative approach to data analysis because the targeted context has received little attention in the literature and developing countries are attempting to adapt and implement cutting-edge approaches in higher education institutions. In the process of gathering data this study has recruited 12 students with bachelor's, master's, and doctoral degrees from an institution accredited by Higher Education Commission (HEC) Pakistan. Participants ranged in age from 19 to 27 years. In addition, two (n = 02) of the participants were married, while the remainder (n = 10) were unmarried.

The institutional membership and subjects taught by individual participants are not published to preserve their confidentiality.

Procedure

Participants replied to email invites given to several institute departments. Face-to-face, individual, semi-structured interviews were done by the author. Interviews lasted roughly 20–30 minutes. Participants were asked a series of questions meant to elicit lengthy, in-depth discussions about their YouTube-based educational experiences (Galletta, 2013). The questions ranged from quite general to more specialised and were founded in the study's subject matter.

In accordance with Wengraf's (2001) and Galletta's (2013) recommendations for optimal semistructured interviews, the interviewer prompted participants to build on their first responses with a number of follow-up questions and prompts. Participants were also asked to corroborate their statements with specific examples, ensuring that their impressions and interpretations were based on their firsthand experience with the platform.

Data Analysis

Thematic analysis (TA), a well-established method for detecting, interpreting, and reporting patterns within qualitative data, was used to evaluate the transcripts (Braun & Clarke, 2006). TA is theoretically flexible and can be applied in an inductive (data-driven) or deductive (theory-driven) manner, unlike other methodologies that are constrained to specific theories and epistemological viewpoints. The current study utilised a hybrid approach (Fereday & Muir-Cochrane, 2006; see also Braun & Clarke, 2006; Nowell et al., 2017), in which the initial codes were derived primarily from the raw data, but a framework was utilised for the integration of codes and development of themes.

The authors strictly adhered to a six-step process for thematic analysis to guarantee that the research was conducted consistently and that the findings could be considered reliable. An audit trail was maintained consisting of all raw data, annotated transcripts, tables, diagrams, memos, and voluminous notes that exhaustively recorded how the analysis evolved (Nowell et al., 2017; Wolf, 2003). In accordance with criteria for maintaining the credibility of TA (Nowell et al., 2017), the authors frequently completed independent analysis segments before examining and discussing the results. Throughout the analytical procedure, all judgments were recorded, and the writers engaged in continuing, reflexive discourse (Braun & Clarke, 2006). In addition, the initial phase of familiarisation included listening to each audio recording while taking notes, followed by reading, rereading, and annotating each transcript. The analysis then shifted to a broader focus, constructing coherent and meaningful patterns (themes) from the codes. The authors switched to a primarily deductive approach for this phase.

Consistent use of this methodology to the entire data set (Nowell et al., 2017) produced two themes: "Learning through YouTube" and "Impact of YouTube on academia." The themes were thoroughly reviewed and amended, and their "internal homogeneity" (meaningful data cohesiveness inside the themes) and "external heterogeneity" (obvious contrasts across the themes) were evaluated (Patton, 1990). The authors then reread the whole data set to ensure that the chosen themes reflected the most significant and pertinent data items in connection to the study topic (Braun & Clarke, 2006).

RESULTS AND DISCUSSION

Learning through YouTube

According to interview responses, the majority of respondents have employed YouTube for educational purposes. YouTube is a global, free online platform that is utilised by everyone. Everyone on YouTube can use their knowledge to instruct people throughout the globe. Students utilise it for academic and other purposes. On the other hand, numerous academics and educators are creating information for students around the globe. Additionally, they have shared views on YouTube, generating opportunities from which everyone can profit. The following are interviewees' responses.

YouTube served as the finest learning medium for two of the participants, according to their statements. The content released on YouTube facilitates communication because it is produced by multinational content creators, hence increasing its value.

"YouTube has proven to be one of the best platforms for learning perspective. [....] You can take help from the content, and it provides opportunities to everyone. Anyone can create content and also earn from YouTube."

"YouTube is extremely beneficial for learning. From a learning perspective, students can take insights into any topic or subject from the book. [....] That helps in getting many perspectives on that topic. [....] You can take global insights because there are many international content creators on YouTube that anyone can access."

We identified YouTube's convenience as one of the confounding elements in our data analysis. In addition, participants reported feeling satisfied with the knowledge and information supplied on the YouTube site.

"YouTube is the best source for students that are fond of learning. [....] Students can benefit from it, and teachers can use it to produce content and educate throughout the world. There are numerous scholar's channels on YouTube that teach, [....] and they are quite beneficial to students all over the world."

"As a student, [....] YouTube has helped me a lot in many academic subjects. It has bought ease to my life. [....] YouTube act as the beneficial source of knowledge and information for students."

The veracity of YouTube's content and the ease with which it facilitated the study of difficult subjects emerged as two other important factors. In addition, the competence of the content provider attracted a substantial number of users to YouTube.

"If you're talking about learning from the standpoint of a student, [....] then yes, I've told you that you can learn the difficult topics that you don't comprehend from the university [....] or any other institute. [....] And for teaching, by using skills and knowledge many people who have expertise in any area is teaching students internationally through their content."

"[....] YouTube plays an important role in both learning and teaching, as evidenced by the economics teacher at our university but then left, and his videos on YouTube are still available, [....] which are very useful for all students in the first and second semester who can go to those videos whenever they need help."

Some of the participants also mentioned other uses of YouTube:

"YouTube has allowed me to travel the world by watching global content. Through their vlogs and other informational content, it aids in providing engagement to people from other cultures. If YouTube didn't exist, none of this would be feasible."

Impact of YouTube on Academics

The perspectives of the respondents on YouTube's effect on their academic achievement have been revealed. The majority of participants recounted their YouTube experiences during the Covid-19 conference. The closing of academic institutions forced the usage of online resources such as YouTube. Several of them also mentioned how YouTube helped them with tests and academic assignments during Covid-19. According to other participants, YouTube tutorials assisted them in their freelance endeavours. The majority of respondents posted YouTube content pertaining to numerical subjects, such as finance, mathematics, accounting, economics, and related initiatives.

"During Covid-19 lockdowns [....] and the virtual shift of institutes, YouTube helped me a lot in all of my academic. YouTube helped me a lot in clearing my academic concepts."

"[....] YouTube helped me in clearing my mathematics and finance problems. Few channels have step-by-step solving mathematics problems. [....] One of YouTube's helpful features is its suggestion

for the same content after watching one. Other than that when I was working on a psychology project. I've gone through the insights from different channels on YouTube. [....] There was one channel on YouTube of economics in which content of both subject's microeconomics and macroeconomics were present that helped me a lot in learning and get insights into that subject."

One of the participants also mentioned that the platform also facilitated students for the preparation of their entry test exams:

"I've experience of using YouTube when was preparing for admission test [....], it has helped me a lot in the mathematic subject. After that, I am using YouTube mainly for accounting and finance [....] and I have learned to run Excel from YouTube. If I have any confusion in any excel formula, I open YouTube and search for videos on it. Recently, I had one financial modeling project, I've searched every single video on the topic and learned everything from YouTube."

The study of the replies also revealed that the vast majority of respondents utilised YouTube frequently due to the platform's convenience.

"I am studying econometrics that is too difficult for me to understand certain terms. [....] So, to understand that subject I go to YouTube and search lectures of professors. YouTube gives you freedom, [....] it gives you access to many features without any time limitation. It also helped me a lot in making different presentations."

"YouTube is providing ease in many ways. When for a single topic where you must read the whole book, YouTube provides you small tutorials and videos that make topics precise, easy, to the point & visualized that help in understanding effective and efficient way. Additionally, it is also considered as a career option."

"YouTube has helped me a lot in academics throughout the degree. Whenever I have any difficulty in my academics after reading a book if I don't understand the topic I immediately go to YouTube. So, it has proven to be my best friend."

CONCLUSION

This study's conclusions resulted in numerous theoretical and practical ramifications. Watkins and Wilkins (2011) found that students' propensity to utilise YouTube for a wider variety of activities is influenced by YouTube's perceived utility and its perceived ease of use. Furthermore, it was discovered that student attitudes toward YouTube use had a favourable and significant effect on whether or not they use YouTube for instructional purposes. After classroom lectures, students view YouTube as an important intellectual resource, according to the report. YouTube has been demonstrated to be an effective, user-friendly, and abundant personal tutor for students. Therefore, researchers working in the disciplines of instruction and educational development can use these data to better comprehend how students see YouTube usage. This has practical ramifications for educational institutions, which should prioritise providing internet connection to students who wish to utilise YouTube and other online learning resources. Another option of deployment is for institutes or academics to provide such a platform online or to offer hybrid programmes. Even when they are not in class, students have access to materials and can learn remotely. In terms of policy, countries are urged to enact regulations that permit YouTube and similar sites to be classified as learning platforms.

Despite providing important insights, this study has limitations that necessitate more study. This study had a limited sample size, which was its most significant restriction. Despite the fact that this study fills a need in the academic community, it should be noted that it only examined students from a single institution. As a result, the institution's interview findings cannot be generalised and regarded valid from a global perspective. On the other hand, future research could investigate additional institutions in order to obtain more insightful results from a variety of perspectives. In addition, research on the same subject can be undertaken quantitatively with a bigger sample size. Consequently, the quantitative nature of the study may result in the removal of more informative and expansive

information. Others may choose to improve their research by employing a mixed-methods strategy. Future research should evaluate comparisons between the findings of this study and those derived from met analysis in other nations. This could lead to further insightful discoveries not included in the present study.

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