

Role of YouTube as a Learning Medium in Knowledge Construction among Undergraduate Students

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ABSTRACT

This study was conducted to explore the role of YouTube as a learning medium in knowledge construction among undergraduate students. The research explored various factors that influence the effectiveness of YouTube in enhancing student knowledge at the undergraduate level. The purpose of the study is to explore the role of YouTube learning on students' retention of knowledge. The population of the study comprised undergraduate students from various universities and colleges in Gujranwala. A total of 20 undergraduate students were selected as the sample for the study using convenient sampling. The study was qualitative in nature and an exploratory method was used. Data was collected using semi-structured interviews based on a thematic analysis framework. The interview schedule was designed to gather detailed insights into students' experiences and perceptions of YouTube as a learning tool. Thematic analysis with open coding was employed to identify recurring themes and patterns in the data. The findings of the study revealed that YouTube significantly enhances knowledge construction through its variety of content, user-friendly interface, and alternative teaching methods. However, issues such as information credibility and potential distractions were also highlighted. Most students agreed that YouTube is a valuable supplementary resource in their educational journey.

Keywords: YouTube, Learning Medium, Knowledge Construction

Introduction

In the present era, technological advancement has become a cornerstone of modern society, significantly simplifying daily activities and offering substantial benefits across various sectors, including the economy, health, and education (Kristian & Pradnyadewi, 2021). Within the educational landscape, technology serves as a powerful catalyst for enhancing the learning

process. It provides unprecedented access to information and diverse learning materials, thereby facilitating a more engaging and effective educational experience for both students and educators. Among the various digital tools, YouTube has emerged as a particularly influential platform for communication and learning. As a highly popular social media site containing a vast repository of online videos, YouTube offers numerous non-traditional and practical opportunities for teaching and learning (Kanwal et al., 2023). Its large library of "how-to" tutorials and video lessons covering a myriad of topics enables users to learn new things and skills in an interactive mode, which has been proven to encourage learning and enhance academic performance. This tool has seen it adopted all over the world, even with foreign institutions adopting videos from YouTube as a learning tool in their courses (Burhanli et al., 2021).

The attractiveness of the platform reaches beyond the university student to younger generations, with the 10-12-year-old age group utilizing it as a source of information-seeking, entertainment, and ease of use. This commonality is evidence of the position of YouTube as an informal learning environment where learners can create, discover, and share information (Pradnyadewi et al., 2021). For teachers, YouTube is a useful tool for continuing education since they are able to learn from subject experts to enrich their own knowledge. The audiovisual format raises interest and facilitates recall, hence providing an appealing means of teaching (Srinivasacharlu, 2020).

Although the use of YouTube tutorials in education has been thoroughly studied in other contexts around the world, its particular effects and potential as an educational tool in nations such as Pakistan are a relatively understudied field (Kanwal et al., 2023).

Literature Review

YouTube

YouTube is a big US video site. It is part of Google. It was made in 2005 by Chad Hurley, Steve Chen, & Jawed Karim (Srinivasacharlu, 2020). It is now one of the top sites in the world. It gets over 1.7 billion views each month (Iftikhar et al., 2019). On this site, folks can post, watch, like, share, & talk about clips. It has lots of kinds of videos. Some are made at home & some are made by big firms (Srinivasacharlu, 2020). It's not just for fun. YouTube helps with school too. It is a key Web tool for learning all over the world (Iftikhar et al., 2019).

YouTube as a Pedagogical Medium

YouTube has evolved from a simple video-sharing platform into a powerful and versatile pedagogical (teaching) tool.

A Vast Repository of Educational Content

YouTube serves as a massive, free-access video library providing an immense quantity of educational material. It hosts millions of educational videos uploaded daily, covering diverse subjects and academic levels (Aliffia et al., 2024). This includes dedicated educational channels like YouTube EDU, which offers structured playlists of tutorials and lectures, and YouTube

Teachers, a platform for educators to share their lessons (Mady et al., 2020). This vast repository makes it easy for both students and teachers to find video references relevant to their topics of study, fulfilling on-demand learning needs and encouraging lifelong learning (Burhanli et al., 2021).

A Huge Collection of Learning Videos

YouTube has an enormous amount of educational content. Every day, millions of learning videos are uploaded on every subject you can imagine (Aliffia et al., 2024). There are even special channels made just for education, like YouTube EDU, which organizes videos into learning playlists (Mady et al., 2020). This makes it a great place for students to learn new things on their own, at any time (Burhanli et al., 2021).

Fits How Students Learn Today

Today's students are used to getting information from the internet. YouTube is perfect for them because it is visual, engaging, and easy to use (Aliffia et al., 2024). Instead of just reading from a textbook, students can watch a video that explains a topic. This makes learning more interesting and can help students stay focused (Agung et al., 2021).

Benefits and Impacts on Learning

Enhancing Comprehension and Clarifying Concepts

One of the primary educational benefits of YouTube is its ability to improve student understanding. Audiovisual videos stimulate multiple senses, allowing students to see and hear information, which helps them connect learning to real-world experiences (Yusuf et al., 2021). Complex concepts, procedures, and skills—from scientific processes to learning theories—can be effectively illustrated and clarified through video, making abstract or difficult topics more comprehensible for undergraduate students (Srinivasacharlu, 2020).

Promoting Student-Centered Learning

YouTube facilitates a shift towards a more student-centered learning model. Students are not just passive consumers but can also become creators of content. When students prepare and upload their own videos, it enhances their social interaction, design, production, and evaluation skills, leading to a multi-dimensional understanding of the subject matter (Nacka et al., 2020). This active participation reflects the principles of constructivist learning, where students take ownership of their educational journey.

Developing Specific Skills

The platform is an effective tool for developing various academic and language skills. Research has shown that YouTube can help students improve their speaking skills in English by increasing their knowledge of vocabulary, grammar, and pronunciation through targeted videos

(Kristiani & Pradnyadewi, 2021). Similarly, it can be used to enhance technological and writing skills, providing a versatile medium for holistic skill development (Kristiawan et al., 2023).

Marketing and Institutional Outreach for Universities

From an institutional perspective, universities are leveraging YouTube as a powerful, free marketing channel. By creating official channels, higher education institutions can market their programs, publicize degrees, and develop stronger connections with prospective and current students (Baadel & Ahmad, 2020).

Challenges and Strategic Implementation

Quality and Relevance

There is a concern regarding the variable quality of user-generated content and a lack of specifically designed high-quality learning materials for academic purposes (Abbas et al., 2020).

Socio-Economic Barriers

Slow internet speeds, language barriers, and limited digital literacy further hinder the platform's effectiveness as an equitable educational tool (Abbas et al., 2020).

Effective Integration Strategies

To maximize YouTube's educational potential, educators must employ strategic integration. Berk (2009, as cited in Qassim et al., 2020) outlines several techniques for effectively using video in the classroom. These strategies move beyond passive viewing and include:

- Using videos to introduce new data, illustrate concepts, and showcase contrasting viewpoints.
- Sparking discussions and acting as a springboard for group activities.
- Analyzing good and bad examples to hone critical thinking skills.
- Injecting humor or inspirational messages to maintain engagement.
- Employing collaborative projects based on video content to foster deeper learning.
- By adopting these methods, educators can transform YouTube from a simple source of information into an active and engaging learning tool.

Purpose of the Study

The purpose of researching the role of You-Tube as a learning medium in knowledge construction among undergraduate students is to explore the role of You-Tube learning in students' retention of knowledge. Researching the role of YouTube learning in knowledge construction among undergraduate students wouldn't just be about how well they memorize things. It would be more about how YouTube helps them build their understanding of a subject.

Research Questions of the Study

1. How much You-Tube learning is helpful for enhancing the knowledge of students?
2. What are the perceived benefits of using YouTube as a learning medium among undergraduates?
3. What are the drawbacks of YouTube as a learning medium among undergraduates?

Significance of the Study

You-Tube caters to various learning styles, including visual, auditory, and kinesthetic. Students find videos that align with their preferred way of learning, making it easier to understand and retain information. This research can help educators by showing them successful learning techniques that take advantage of You-Tube's strengths while avoiding its downsides. Ultimately, this might be beneficial for everyone involved teachers, students, and even You-Tube content creators by encouraging responsible use of information and creating a stronger learning environment. This study might have a positive influence on student's teacher learning process. Undergraduate students might be growing their interest by using You-Tube.

Method and Procedure

This research employed qualitative research design with exploratory approach to explore the role of You-tube as a learning medium in knowledge construction among undergraduate students. A total of 20 participants (10 males and 10 Females students) were selected through purposive sampling from three public and 2 private higher education institutions in Gujranwala city. Data was gathered through a self-developed interview schedule, which included both demographics details and open ended question which are designed to explore students learning experience with You-tube. Interview was conducted face to face and via telephone, depending on the availability and convenience of the participants. All interviews were recorded after getting permission. The credibility of the research was ensured by maintaining the anonymity, privacy and confidentiality of all participants. Thematic analysis was used to analyze the collected data. Interview recorded were transcribed, and the responses were codes to identify recurring themes and patterns relate to you-tube contribution to knowledge construction and critical thinking. All the codes were developed from the new ideas shared by the participants during the interviews. As we reviewed the data, we refined these codes to make clearer and more connected. This helps us to create more meaningful and better organized themes and sub-themes. In the final step, we presented the main themes by highlighting what motivated the participants and the context in which their experiences were shared.

Data Analysis and Interpretation

Qualitative Data was analyzed through Open coding and Thematic Analysis to explore the various aspects of YouTube as a learning medium. After interviewing the undergraduates, different themes were generated. These themes include knowledge enhancement, benefits of YouTube as a learning medium, Alternative of traditional teaching methods and drawbacks of YouTube as a learning medium.

Knowledge Enhancement

The analysis shows that YouTube plays a central role in knowledge construction. Respondents described the platform as distinctive and engaging due to its visual and auditory teaching methods. While some participants considered traditional classroom teaching more effective, the majority reported that YouTube provided a valuable alternative. It was particularly appreciated for simplifying complex topics into more manageable forms.

Skills Development

A key theme we see is how YouTube helps with skill growth. Many said that the site gives clear, step-by-step guides. This makes new skills easy to pick up. Interviewee 6 said YouTube was key in learning web work. Interviewee 19 spoke on learning resin art there & making it pay off. These tales prove YouTube helps in getting both know-how & useful skills that can earn cash.

Clear Understanding and Simplicity

The respondents appreciated YouTube for the simplicity it offers. The fact that they could replay videos several times was identified as an advantage, which helped learners reinforce their knowledge. Interviewee 20 liked the fact that the platform offers additional information and comprehensive explanations, whereas other respondents highlighted the fact that the simple language used in videos limited confusion. The results prove that YouTube's simplicity of communication creates a platform where even complex matters are easily learned.

Access to Current Information

YouTube's capacity to provide current and related information was a key benefit. Respondents appreciate having access to learning about recent advancements in their areas of study. Interviewee 17 stated that YouTube always gave them the latest information, keeping them current with new trends and innovations.

Communication Style and Engagement

The platform's straightforward, welcoming, and conversational tone was highlighted time and again. Participants were glad that YouTube creators break down complex ideas into achievable steps. For example, Interviewee 8 said that the simple tone of communication made learning fun and easier to grasp. Most also noted that interactive and video-based learning kept them interested and engaged, which happens less through more conventional means of learning.

Drawbacks of YouTube as a Learning Medium

YouTube as a learning medium offers many advantages, but it also has some drawbacks. One key issue is the variability in content quality, which can affect the reliability of the information. Respondent says that sometimes they do not find all videos accurate or well produced, leading to inconsistent learning experiences. YouTube provides valuable resources; the drawbacks of

variable content quality and less structured learning can impact the effectiveness of the educational experience.

Ads issue

YouTube as a learning medium has notable drawbacks, particularly concerning issues with advertisements. Many respondents find that frequent ads can disrupt the learning experience and detract from the focus on educational content. Interviewee 9 noted, Ads distract me and break the flow of learning, making it harder to stay focused on the material. I find it frustrating when an ad interrupts right in the middle of an important point. I feel that these distractions reduce the effectiveness of the videos and make it challenging to fully absorb the content. I wish I could watch without these interruptions so that I could concentrate better and learn more efficiently.

Untrained Teachers

YouTube as a learning medium has notable drawbacks, particularly regarding the presence of untrained teachers. Many respondents find that some content creators lack formal training, which can lead to mistakes or less effective teaching. Since anyone can post on the platform, the quality and reliability of educational content can vary. Interviewee 5 mentioned. These responses highlight that, while YouTube offers a wide range of learning resources, the presence of untrained teachers can negatively impact the quality and reliability of educational content.

Wrong Thumbnail issue

YouTube as a learning medium has notable drawbacks, particularly concerning issues with misleading thumbnails. Many respondents find that misleading or click bait thumbnails can lead to frustration and hinder the learning experience. The platform's use of eye-catching thumbnails to attract viewers sometimes results in content that does not match the visual promise, which can waste time and cause disappointment. Interviewee 10 says,

Another, Interviewee 14 mentioned, When thumbnails don't match the content, it's frustrating and makes it harder for me to find useful educational material. I often click on a video expecting it to cover a specific topic, only to find that the actual content is completely different. I feel that misleading thumbnails waste my time and make my learning process less efficient

No Face-to-Face Interaction

YouTube as a learning medium has notable drawbacks, particularly regarding the lack of face-to-face interaction. Many respondents find the absence of direct communication with instructors and peers can limit their learning experience. Without real-time feedback and personal engagement, learners may struggle with immediate clarification of doubts and dynamic discussions. Interviewee 8 noted,

These responses highlight that, while YouTube offers valuable educational content, the absence of face-to-face interaction can hinder the learning process by reducing opportunities for immediate support and personalized engagement.

Benefits of YouTube as a learning Medium

YouTube as a learning medium offers several benefits that contribute to construct the knowledge of undergraduates. The results highlight how YouTube provides flexibility and accessibility, making it a valuable tool for learning. Many respondents find YouTube beneficial because it allows them to learn at their own pace and access a wide range of content. Some mentioned that the combination of visual and auditory aids makes learning more engaging and effective.

Different Teachers to Teach

YouTube as a learning medium provides significant benefits by offering access to a diverse range of teachers and teaching styles. Some respondents appreciate how the platform connects them with different educators, each bringing unique perspectives and methods. This variety allows respondents to choose the best teaching style that suits their needs and preferences. This variety makes learning more enjoyable and effective. Similarly, Interviewee 1 mentioned, having access to different teachers on YouTube allows me to understand subjects from various angles. I appreciate that I can learn from multiple experts who explain the same topic in different ways. These comments show that YouTube's variety of teachers makes learning better by providing different ways to understand and to develop new ideas.

Fulfil Basic needs

YouTube as a learning medium offers significant benefits by helping respondents fulfil their basic learning needs. Many respondents find that the platform provides essential resources and information that are crucial for their educational growth. The many videos available cover basic concepts and skills, making it easier for learners to understand important topics.

More Engaging

YouTube as a learning medium offers significant benefits by making education more engaging. Many respondents say YouTube provides interactive and eye-catching content that grabs their attention. The variety of video formats, including animations, demonstrations, and interactive elements make learning more dynamic, interesting and more engaging. Interviewee 4 noted,

Gives more Perspectives

YouTube as a learning medium offers valuable benefits by providing multiple perspectives on various topics. The wide range of videos from different creators allows learners to explore different angles and opinions.

User Friendly

Interviewee 8 mentioned, the user-friendly features of YouTube make it easy for me to access and organize my learning materials. I find it helpful that I can create playlists and save videos for later, which keeps my study materials well-organized. This organization helps me stay focused and efficiently track my progress.

Findings

Knowledge Enhancement through YouTube

The analysis showed that the majority of students concurred that YouTube greatly improves their knowledge of academic concepts. Video content tended to break down intricate ideas into something simpler and more understandable, making challenging subjects easier to understand. YouTube was also said to reinforce learning in class by presenting extra views that made their knowledge even better. Students enjoyed the variety of information, which allowed them to look into various perspectives and access material appropriate to their individual learning styles.

Advantages of YouTube as a Learning Medium

The students pointed to a number of advantages of YouTube as a learning medium. The ability to learn independently at their own speed, review content when necessary, and access a variety of topics outside of books or lectures was highly appreciated. They also pointed to the fact that videos on YouTube were interesting, interactive, and more captivating than conventional materials, which could help maintain concentration and motivation.

Alternative Source of Classroom Learning

YouTube frequently found itself an efficient substitute source of learning for the classroom. Students believed that it reinforced conventional methods with both visual and audio experiences. It was particularly helpful for those who had difficulty with textbook learning. Most highlighted its accessibility and utility in learning new skills or delving into topics outside the formal curriculum. Some students held firm, though, that YouTube could not entirely substitute formal guidance from instructors.

Flaws of YouTube as a Learning Platform

In spite of its virtues, students identified some flaws. Advertisements and deceptive thumbnails tended to break concentration and wasted time. The absence of real-time contact with teachers curtailed opportunities for clarification and timely feedback. Concern was also expressed with regard to credibility, inasmuch as content produced by unqualified producers could contribute to mis formation.

Limitations of the Study

This study has several limitations. Firstly, the research was geographically restricted to students from a specific location, limiting the generalizability of results to other contexts. Secondly, data collection relies on semi-structured interviews, which may not fully capture the breadth of student experiences.

Another limitation is the inconsistent quality of YouTube content, which results in varying levels of educational value. The absence of quantitative data also restricted broader generalizations about students' engagement patterns. Finally, technological challenges such as poor internet connectivity and outdated devices affected students' access to content.

Recommendations

- Teachers could provide curated lists of reliable YouTube videos aligned with course content.
- Teachers should encourage students to use YouTube for projects and assignments.
- YouTubers should focus on improving the quality and credibility of educational content.
- Educational institutions could integrate YouTube videos into curricula as supplementary resources.
- Content creators should update their videos regularly with current information.
- Creators could provide ad-free versions of content for educational purposes.
- YouTubers should avoid misleading thumbnails and prioritize clear communication.
- Content creators should adopt effective teaching styles to improve student understanding.
- Students could also use YouTube to develop personal and professional skills.

Future Call for Researchers

- Future research could evaluate the effectiveness of different types of YouTube content (e.g., lectures, tutorials, vlogs).
- Studies could investigate how students use YouTube for self-regulated learning, including time management and goal setting.
- Researchers might examine YouTube's role in developing students' critical thinking skills.
- Comparative studies could explore differences between YouTube-based learning and traditional methods such as textbooks and in-person lectures.

Conclusion

The study concludes that most students perceive YouTube positively as a learning medium. They found it to be effective in simplifying complex concepts, providing diverse perspectives, and enhancing classroom learning. Its flexibility, accessibility, and engaging content made it particularly valuable for knowledge construction. However, concerns about credibility, advertisements, and lack of teacher-student interaction indicate that YouTube is best suited as a supplementary resource rather than a complete replacement for traditional methods. Overall, YouTube plays a significant role in enhancing knowledge among undergraduate students, offering a dynamic and modern approach to learning.

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