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MEDICAL STUDENTS' PERCEPTIONS OF THE ROLE OF PODCASTS AND YOUTUBE IN ENHANCING MEDICAL KNOWLEDGE AND THEIR REVIEW FROM AN ISLAMIC PERSPECTIVE

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ABSTRACT

This study explores the perceptions of medical students regarding the role of podcasts and YouTube in enhancing their understanding of medical knowledge, while also examining the factors influencing their usage and reviewing these media from an Islamic perspective. Using a descriptive qualitative approach, data were collected through in-depth interviews with third-year medical students at YARSI University who actively utilize these platforms as self-directed learning tools. The findings reveal that students perceive podcasts and YouTube as effective, flexible, and engaging resources for visualizing complex medical concepts, revising course material, and supporting individual learning preferences. Internal factors such as motivation, digital literacy, and learning styles, as well as external factors like internet access, content quality, and institutional support, significantly affect usage. From an Islamic perspective, the majority of students believe that the use of digital media for learning aligns with Islamic values, provided it is used with sincere intentions and does not interfere with religious obligations. This study highlights the growing relevance of digital media in modern medical education and supports its integration into curriculum design with consideration of ethical and religious values.

Keyword: medical education; YouTube; Islamic perspective; digital learning; student perception; self-directed learning

INTRODUCTION

The rapid advancement of information and communication technology (ICT) has brought significant changes to various aspects of life, including education (Bagde et al., 2021). With easier internet access and the evolution of digital devices, a new era of learning has emerged—one where information can be obtained quickly and efficiently (Castells, 2010). These technological developments have transformed traditional educational methods, encouraging learners to engage with more flexible and accessible forms of knowledge acquisition.

In this context, podcasts and YouTube have become increasingly popular as learning tools. Podcasts, as audio-based media, and YouTube, as the largest video-sharing platform, provide medical students with interactive and flexible access to information. These platforms enable learning anytime and anywhere, accommodating students' diverse schedules and preferences (Bates, 2019; Burgess & Green, 2018). Their audiovisual features contribute to an enriched learning experience that supports different learning styles and needs.

In Indonesia, several studies have highlighted the growing use of podcasts and YouTube

in education. According to the International Journal on Informatics Visualization, the use of these platforms has significantly increased among students due to their accessibility and flexibility. Approximately 70% of users reported higher engagement and motivation when learning through these media, particularly in the field of medical education. The consumption of educational content has grown by more than 50% in recent years, indicating a strong trend toward digital learning methods.

The advantages of these platforms lie in their appealing formats and ease of understanding. YouTube allows students to visualize medical procedures, while podcasts offer in-depth discussions on medical topics that can be accessed during daily routines (Kay, 2012). Their popularity is rising among students and young professionals, offering high-quality content in a more engaging and convenient manner (Burgess & Green, 2018). Additionally, interactive features such as comments and discussions support collaborative learning and user engagement (McLoughlin & Lee, 2010). These qualities make podcasts and YouTube essential tools in online learning, particularly in the medical field.

Multiple studies have confirmed the benefits of these digital platforms. For instance, Iwantara et al. (2014) found that YouTube videos significantly improved student motivation and comprehension in science subjects. Similarly, Anisa and Sahputra (2020) at Universitas Garut revealed that integrating YouTube into a public speaking course increased active participation and academic performance. Berk et al. (2020) further demonstrated that podcasts helped medical students grasp complex topics, while Azer (2019) emphasized that educational videos on YouTube enhanced engagement and understanding of difficult concepts such as cardiovascular physiology.

In Indonesia, Kurniawan et al. (2024) observed a 50% increase in educational content consumption through YouTube and podcasts over the past five years. They attributed this growth to the platforms' accessibility and flexibility, which were major factors in students' decisions to use them as learning tools. These findings highlight the relevance of these media in supporting independent and technology-driven learning environments, especially for demanding fields like medicine.

Building on this data, the present study aims to explore the perceptions of medical students at YARSI University regarding the role of YouTube and podcasts in enhancing their medical knowledge. The research focuses on students from the 2022/2023 cohort who regularly use these platforms for self-directed learning. The study seeks to offer recommendations for integrating digital media into medical education curricula, thereby fostering more effective and innovative learning strategies.

Islamic teachings strongly encourage the pursuit of knowledge, not only as an individual act of worship but also as a practice with high social value. The Quran states: "Allah will raise those among you who believe and those who have been given knowledge by degrees" (QS Al-Mujadila/58:11). The use of technology in education aligns with Islamic principles that emphasize utilizing permissible and beneficial tools for collective well-being. Therefore, platforms like podcasts and YouTube can serve as both instruments of learning and media for da'wah, supporting the development of knowledge—especially in the field of medicine—so long as they are used with the right intentions and in accordance with Islamic values.

This research offers significant benefits by enhancing the understanding of the role of digital media, such as YouTube and podcasts, in improving medical knowledge among medical students. The findings provide valuable insights for educators and curriculum designers to integrate these digital platforms into medical education, fostering more flexible, innovative, and engaging learning methods that cater to diverse student learning styles. Furthermore, the study highlights the potential of these media in promoting self-directed learning, allowing students to access educational content independently, at their own pace, and according to their schedules. The research also emphasizes the alignment of digital learning tools with Islamic principles, offering a unique perspective on how technology can be used for beneficial and ethical educational purposes. Additionally, the study contributes to the development of a technology-driven learning environment in medical education, encouraging active student engagement and motivation, and ultimately supporting the creation of a more effective and contextually relevant learning experience.

RESEARCH METHODS

This study utilized a qualitative research method aimed at deeply exploring medical students' perceptions of the role of podcasts and YouTube in enhancing their medical knowledge. Qualitative methods are appropriate when researchers seek to understand complex social phenomena, such as how students adopt new technologies for learning purposes (Creswell, 2013). This method was selected because it enables in-depth exploration of participants' views and experiences while capturing the context and meaning behind their behaviors (Patton, 2002). In-depth interviews were employed as the main data collection technique, offering flexibility for respondents to express their thoughts freely and in detail. This technique is widely used in qualitative research for its ability to capture rich data and provide insights into the perspectives of the study subjects (Guest, Bunce, & Johnson, 2006). In-depth interviews allow researchers to probe further when necessary, a strategy emphasized by Ritchie et al. (2013), who highlight that such interviews can uncover contextual data that other methods may not reach.

Research Design

The research design focused on using in-depth interviews as the primary data collection tool. These interviews were conducted with medical students at YARSI University who actively use podcasts and YouTube as learning media. A semi-structured interview guide was utilized to provide participants with the freedom to respond openly while keeping the discussion aligned with the study objectives (Patton, 2002). Questions covered their experiences with the platforms, perceived benefits, and encountered challenges. This approach ensures the collection of relevant and in-depth data. It also allows for capturing a range of student experiences from diverse academic and social backgrounds (Guest, Bunce, & Johnson, 2006). Such diversity facilitates comparative analysis between participants, enabling the identification of general patterns as well as individual differences (Ritchie et al., 2013).

Population

The population for this study consisted of all medical students at YARSI University enrolled in the 2022/2023 academic year. This population was chosen based on the assumption that current medical students are highly familiar with digital technologies like podcasts and YouTube (Bates, 2019). These platforms serve as alternative learning sources that complement formal classroom instruction (Kay, 2012).

Medical students were specifically selected because they require in-depth understanding of complex medical topics. Digital platforms such as YouTube and podcasts offer them the opportunity for self-directed learning and easy access to simplified educational content (Mayer, 2014). Moreover, the flexibility and accessibility of these platforms allow students to tailor their learning experiences according to individual needs (Laurillard, 2002), making them a highly relevant population for this research.

Sample

The sample comprised medical students at YARSI University who voluntarily agreed to participate in interviews. Participation was based on the assumption that students who actively use YouTube and podcasts are intrinsically motivated to engage in self-learning (Deci & Ryan, 2000). Participants were selected based on their willingness to share experiences and frequency of platform use in medical learning contexts (Knowles, 1984).

In qualitative research, sample size is determined by the principle of data saturation, where data collection ends when interviews no longer yield new insights (Guest, Bunce, & Johnson, 2006). This ensures a focus on data quality rather than quantity. Literature suggests that data saturation is typically achieved with 12 to 20 participants, depending on the homogeneity of the population and the research focus (Creswell, 2013; Mason, 2010).

Sampling Method

Purposive sampling was used to select participants based on specific criteria relevant to the research objectives. This method is commonly used in qualitative studies to ensure that only individuals with direct experience related to the topic are included (Patton, 2002). Purposive sampling allows researchers to obtain more relevant and contextual data than random sampling would. By setting criteria such as frequency of use and types of content accessed, the study ensured that participants had substantial experience using podcasts and YouTube for medical education (Guest, Bunce, & Johnson, 2006). The inclusion and exclusion criteria were as follows: Inclusion Criteria: Third-year medical students (sixth semester) enrolled in the 2022/2023 academic year at YARSI University. Exclusion Criteria: Students suffering from severe illness or those unable to communicate effectively in Bahasa Indonesia.

Sample Size Determination

Sample size was determined based on the principle of data saturation, where no new information or emerging themes appear from the interviews. Therefore, data collection continued until the point where responses became repetitive and no longer contributed additional insights, which was expected to be reached after interviewing approximately 15–20 students (Guest, Bunce, & Johnson, 2006).

Reaching saturation depends on the quality and depth of data, not the number of interview sessions (Creswell, 2013). Saturation is considered achieved when sufficient themes emerge to support comprehensive analysis (Mason, 2010). However, challenges to achieving saturation may include time limitations, participant homogeneity, and the complexity of the phenomenon. More complex topics or diverse populations may require a larger sample to reach meaningful saturation (Ritchie et al., 2013).

Type of Data

This research utilized primary data obtained directly from in-depth interviews with medical students who actively used YouTube and podcasts for independent learning. These interviews aimed to explore participants' perceptions, experiences, and opinions about the role and effectiveness of these platforms in enhancing their understanding of medical content. Using primary data enabled the researcher to gather rich, contextual, and relevant insights aligned with the research focus (Creswell, 2013).

Data Collection and Measurement

Data were collected through face-to-face or online interviews, depending on the availability and preference of participants. A semi-structured interview guide provided flexibility in exploring deeper insights when needed (Patton, 2002). All interviews were recorded with the participants' consent and transcribed verbatim to ensure data accuracy (Ritchie et al., 2013).
Open-ended questions encouraged respondents to provide elaborate and detailed responses without being constrained by predefined answer choices. This enabled participants to express their thoughts in a more nuanced and contextualized manner (Creswell, 2013). Through in-depth interviews, the study gained richer insights than would have been possible using quantitative methods alone (Guest, Bunce, & Johnson, 2006).

Data Collection Instrument

The primary data collection instrument was a semi-structured interview guide developed according to the research objectives. It included key questions about students' experiences using podcasts and YouTube, how these platforms supported their learning, and the perceived benefits and challenges (Patton, 2002). Before formal use, the guide was pilot-tested on a small group of students to ensure question clarity and relevance.
This pilot test helped identify unclear or confusing items and allowed for necessary revisions before conducting the main interviews (Creswell, 2013). Using a refined and tested instrument ensured the collection of valid and reliable data, which is essential in qualitative research for generating meaningful and focused insights (Ritchie et al., 2013).

Data Analysis

The data collected from in-depth interviews were analyzed using thematic analysis, a widely used method in qualitative research to identify, analyze, and report patterns (themes) within the data. The steps included:
Data Transcription – Audio recordings were transcribed verbatim to capture all details

accurately.

Repeated Reading – Transcripts were read multiple times to gain a deeper understanding and to identify potential themes.

Data Coding – Relevant segments of data were marked with codes representing key concepts.

Theme Identification – Codes were grouped into broader themes representing common patterns across the data.

Theme Review – Identified themes were reviewed for consistency and relevance.

Theme Definition and Naming – Each theme was clearly defined and labeled to convey its core meaning.

Data Interpretation – Themes were interpreted in relation to the theoretical framework, helping answer the research questions and generate new insights.

RESULTS AND DISCUSSION

This study involved 15 medical students as respondents, consisting of 8 males and 7 females. Participating respondents had different levels of experience in using YouTube and Podcasts as a source of medical learning. Data was collected during the period from March 2025 to April 2025 to get an idea of the usage patterns, effectiveness, and challenges faced in the use of these two media.

The Role of YouTube and Podcasts in Medical Learning

From the data analysis carried out, it was found that at least 10 main roles felt by students in the use of YouTube and podcasts as learning media.

1. Complex Concept Visualization Media

One of the main roles of YouTube is its ability to present clear and interactive visualizations to help understand difficult medical concepts. Many students find it easier to understand the pathophysiology, anatomy, and mechanisms of disease when explained through animation or moving illustrations. This kind of content is often easier to understand than reading a textbook full of technical terms.

2. Material Recalling Tool

Digital media also serves as a means to repeat material that has been studied previously. Features like rewind, playback speed, and bookmarking on YouTube and podcasts allow students to repeat parts they don't understand without having to reread entire chapters or manually re-record.

3. Alternative Learning Resources

Many college students use YouTube and podcasts to seek additional explanations from outside the classroom. When lecturers' explanations are too fast or do not suit their learning style, students look for new perspectives that are easier to digest. Some educational channels are even considered more informative than material that is delivered formally.

4. Flexible Learning Facilities

Digital media provides flexibility of time and place in the learning process. Students can access content while traveling, between breaks, and even before bedtime. Podcasts, in particular, allow for passive learning that remains useful while physical activity is in progress.

5. Learning Motivation Triggers

A more engaging delivery style, diverse content, and a less rigid learning experience make students more motivated to learn. Some respondents found learning through YouTube or podcasts to be more enjoyable than reading textbooks or attending formal lectures.

6. Increase Active Engagement

YouTube and podcasts encourage students to not only passively accept material, but also actively search, assess, and process information that suits their needs. Students tend to take notes on important points, compare sources, and discuss with friends after listening to educational content.

7. Supports Personal Learning Style

Each student has a different learning style: visual, auditory, kinesthetic, or mixed. YouTube and podcasts provide content in a variety of forms, so students can choose which one works best for them. The duration, speed, and language can also be adjusted.

8. Professional and Career Inspiration

Some students said that they followed podcasts or channels that discussed doctors' experiences, career journeys, and current medical issues. It provides insight into the world of medicine beyond college and broadens their point of view.

9. Supporting Cross-Disciplinary Learning

YouTube and podcasts not only cover medical material, but also psychology, nutrition, technology, and even medical ethics. Students can connect various topics to strengthen understanding holistically, especially when working on assignments such as PBL or thesis.

10.Mendorong Self-Directed Learning

Digital media enables students to set their own what they want to learn, when, and how. They can explore the content as needed without having to wait for instructions from the lecturer. This trains independence and learning responsibilities that are very important in the world of medicine.

Faktor Internal

1. Learning Motivation

Students who have high motivation are more active in looking for videos or podcasts to help understand medical materials. They want to become competent doctors, so they learn more enthusiasm and consistency. Conversely, if their motivation is low, they tend to be passive and rarely explore content.

2. Time Management Capabilities

Students who can manage their time well find it easier to set aside time to study through digital media. A neat study schedule makes them more focused and not feel overwhelmed.

3. Learning Style

Each student has a different learning style. The visual ones like videos on YouTube, the auditory ones are more suited to listening to podcasts. If it suits your style, learning becomes more effective and fun.

4. Technology Mastery

Students who are used to using technology find it easier to find and utilize the content they need. On the other hand, if they are not good at technology, they are often confused and lazy

to learn through digital media.

5. Student Interest

If students are interested in a certain topic, they are more diligent in finding suitable videos and podcasts. Interest makes them enthusiastic and not bored quickly.

6. Student Expectations

Students hope to get clear and easy explanations from digital media. They also like it because they can study without pressure and are more flexible in their time.

External Factors

1. Technology Accessibility

The availability of devices and a stable internet connection is essential for students to be able to access learning content smoothly. If access is easy, students tend to use digital media more often.

2. Content Quality

Content delivered by reliable sources and has a clear structure makes students more confident and understand the material presented.

3. Content Type

College students are more interested in content that suits their needs, such as animated videos, clinical discussions, or in-depth real-life cases.

4. Content Duration

The ideal duration for students is usually 10–30 minutes. Too long makes it difficult to focus, too short can be less deep.

5. Educational Institution Support

Recommendations from lecturers and the integration of digital media in formal learning make students more confident in using this media.

6. Learning Environment

A conducive environment, such as a quiet space and support from friends or family, has a profound effect on the focus and consistency of digital learning.

7. Development of Educational Technology

Technological advances such as AR/VR, e-learning platforms, and interactive features make the learning process more interesting, flexible, and tailored to the needs of students.

Islamic Views on the Use of YouTube and Podcasts

The majority of respondents agreed that YouTube and podcasts can be used as a means of studying as long as the content is useful and does not violate Islamic values. In the Islamic view, technology is a tool that can be used for good, including in the process of learning medicine. This digital media is considered an intermediary (wasilah) that facilitates access to knowledge. Islam strongly encourages its people to learn throughout their lives, and the use of modern technology such as YouTube and podcasts is considered to be in line with this spirit. However, students also emphasized the importance of maintaining intentions and not being negligent about worship when using this media. As long as used wisely, YouTube and podcasts are considered to have the potential to become a field of rewards because they help in the search for knowledge that is beneficial to themselves and others.

This research shows that YouTube and podcasts have become an important part of the self-learning process of YARSI University medical students. These two digital media are considered to be able to improve understanding of complex medical materials, such as anatomy and pathophysiology, mainly because of the support of visualization and the flexibility of time. These findings are in line with the study of Wong et al. (2023) which confirmed that interactive visual media is highly effective in supporting the understanding of difficult clinical concepts. Additionally, features such as replay and playback speed allow students to repeat the material as per their needs.

In terms of roles, students use this media as an alternative source when the lecturer's explanation is considered lacking. Content that is presented in an engaging and communicative manner has also been proven to increase motivation and active involvement in learning. Students actively jot down key points, discuss content with friends, and tailor their learning style based on personal style. This is in line with the findings of Zhou & Rana (2022) who stated that personalization and interactivity of digital content play a major role in supporting students' active and interest-based learning.

In addition, internal factors such as motivation, time management skills, learning style, technology mastery, interests, and expectations have been proven to have a great influence on the success of digital media-based learning. Meanwhile, external factors such as access to technology, quality and type of content, duration, institutional support, learning environment, and educational technology developments also play an important role. Chai et al. (2022) stated that the success of digital learning is influenced by a combination of individual readiness and adequate environmental system support.

What distinguishes this study from previous studies is the integration of Islamic values in the use of digital media for learning. The majority of respondents agreed that the use of YouTube and podcasts does not contradict Islamic law as long as they are used to study and do not neglect worship. This perspective enriches a digital learning approach that not only focuses on the effectiveness of technology, but also pays attention to spiritual and moral aspects. Thus, this research makes a new contribution to the development of technology-based medical learning systems that are adaptive, contextual, and valuable.

Medical Students' Perceptions of the Role of Podcasts and YouTube in Enhancing Medical Knowledge and Its Overview in Islamic Views

Medical students in the Islamic view have a great responsibility to study for the benefit of the people. Islam views medical science as part of worship, emphasizing the importance of righteous intentions, integrity, and manners in learning. Thus, medical students must prioritize ethics and professionalism in obtaining and practicing medical knowledge.

In the context of the use of technology, Islam provides a wide space as long as it is used for positive purposes. YouTube and podcasts can be effective means of education and da'wah, including in the health sector. However, Islam also emphasizes the importance of verifying information (tabayyun) so as not to spread misleading news. Therefore, medical students who use this platform must ensure that the content presented is data-driven and in accordance with Islamic values.

Digital technology has great benefits in increasing access to quality medical information.

Platforms like YouTube and podcasts can be flexible learning tools that help medical students deepen their knowledge. This is in line with Islamic teachings that encourage its people to continue to learn and spread knowledge that is beneficial to society.

Thus, in the view of Islam and medical science, students' perceptions of podcasts and YouTube should lead to responsible utilization. Medical students have an important role to play in ensuring that medical information conveyed through digital media not only enhances medical knowledge, but also reflects the ethical values and benefits taught in Islam

CONCLUSSION

This study aims to explore the perceptions of medical students at YARSI University regarding the role of YouTube and podcasts in enhancing their understanding of medical content, while also examining the internal and external factors influencing their use, including perspectives rooted in Islamic values. Employing a descriptive qualitative approach with purposive sampling, the study conducted in-depth interviews with 15 third-year students who regularly use YouTube and podcasts as self-learning tools. The findings indicate that students perceive these digital media platforms as effective learning aids, particularly in clarifying complex medical concepts, reviewing material, and offering flexible, personalized, and engaging educational experiences. Ten key roles of YouTube and podcasts were identified, ranging from serving as visualization tools to encouraging independent study habits. Internally, factors such as learning motivation, time management, learning style, technological proficiency, interest in digital media, and expectations of learning outcomes were found to influence usage. Externally, factors included technological accessibility, content quality and type, ideal duration, institutional support, learning environment, and advances in educational technology. Furthermore, most students believe that the use of YouTube and podcasts in learning aligns with Islamic values, as long as it is approached with good intentions and does not neglect religious obligations. Overall, this study affirms that YouTube and podcasts can support effective medical learning, provided they are utilized with personal readiness, environmental support, and value-based awareness.

Given the effectiveness of YouTube and podcasts in supporting medical education, it is suggested that educational institutions incorporate these platforms more systematically into the curriculum. This could include creating institutional guidelines to ensure that the content used aligns with academic standards and Islamic values. Furthermore, students should be provided with more structured guidance on how to best utilize these platforms for their learning, including time management strategies and methods for critically evaluating online content. The integration of these digital tools should also be complemented by in-person mentorship or online support from faculty to ensure that students are engaging with the content effectively and ethically.

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