



Revolutionizing remote learning: A case study of google meet at an online university

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ABSTRACT: This study investigates the effectiveness of Google Meet in enhancing remote learning experiences at an online university. The research aimed to evaluate the platform's impact on student engagement, satisfaction, academic performance, and the challenges users face. Using a quantitative approach, a structured questionnaire was administered to 120 female students across four faculties—Medical, Economics, Computer Science, and Education. The participants, aged 18-25, provided insights into their experiences with Google Meet through Likert-scale responses on various dimensions. The study sought to assess how Google Meet supports student engagement and participation, its contribution to academic performance, and the overall satisfaction of users. Data were collected via an online questionnaire with sections dedicated to effectiveness, satisfaction, contribution to performance, challenges, and benefits. Responses were analyzed to determine frequencies and percentages, revealing trends and user perceptions. Findings indicated that a majority of participants viewed Google Meet as beneficial for remote learning, with positive impacts on engagement and academic performance. However, challenges related to technical issues and user proficiency were noted. Satisfaction levels varied, reflecting mixed experiences among users. Google Meet is generally effective in supporting remote learning but faces challenges that need addressing. Enhancing user experience through improved technical support and training could further benefit online education.

KEYWORDS: Google Meet, remote learning, student engagement, online education, user satisfaction

Introduction

The rapid advancement of digital technology has significantly reshaped educational practices, particularly through the adoption of remote learning platforms. Google Meet, a video conferencing tool developed by Google, has become a critical component in this transformation, especially in the context of online universities. This case study examines the impact of Google Meet on remote learning at an online university, focusing on its ability to enhance educational delivery, improve student engagement, and address the challenges

associated with virtual instruction (Alturki & Aldraiweesh, 2022; Fuady, Sutarjo, & Ernawati, 2021).

Google Meet offers a range of features designed to facilitate synchronous communication, including high-definition video calls, screen sharing, and breakout rooms. Its integration with Google Workspace enhances its utility by providing a seamless user experience that supports collaborative learning (Al Faruq, Ngadiso, & Supriyadi, 2022). The platform's user-friendly interface and accessibility have made it a preferred choice for educational

institutions transitioning to remote learning models during the COVID-19 pandemic and beyond (Al-Marooof, Alshurideh, Salloum, AlHamad, & Gaber, 2021).

This study explores Google Meet's role in revolutionizing remote learning at an online university by evaluating its effectiveness in delivering lectures, facilitating discussions, and conducting group activities. The research focuses on the platform's technical capabilities and its impact on student engagement and academic performance (Hasbullah, Rahmatullah, Rasli, Khairudin, & Downing, 2022). The study employs both qualitative and quantitative methods, including student surveys, instructor interviews, and usage metrics, to assess Google Meet's influence on the learning experience (Cahyani & Suryaman, 2022).

The shift to remote learning, accelerated by global events, has underscored the importance of effective digital tools for maintaining educational continuity. Google Meet's capacity to support large-scale virtual meetings and its integration with other Google services have proven essential in addressing the challenges of remote education (Hutajulu, 2022). However, the effectiveness of such platforms is also contingent on factors like internet connectivity, user proficiency, and pedagogical strategies (Marian, 2023; Purwanto & Tannady, 2020).

By analyzing feedback from students and educators, this study aims to identify best practices for utilizing Google Meet and addressing any limitations encountered. The findings will contribute to a deeper understanding of how digital tools can enhance remote learning environments and offer insights into the future of online education (Kautsar, Sayfullah, Handayani, Latif, & Firdaus, 2023; Purwoko, Primartadi, Efendi, & Amin, 2022). Ultimately, this case study seeks to illuminate the transformative impact of Google Meet on remote learning, providing valuable lessons for educators, administrators, and policymakers navigating the evolving educational landscape.

Research objective

1. To evaluate the effectiveness of Google Meet in enhancing student engagement and participation in an online university setting.
2. To assess the impact of Google Meet on the overall learning experience and academic performance of students.
3. To identify the challenges and benefits faced by educators and students while using Google Meet for remote learning.

Research Questions

1. How effective is Google Meet in enhancing student engagement and participation in an online university setting?
2. What impact does Google Meet have on the overall learning experience and academic performance of students?
3. What are the challenges and benefits faced by educators and students while using Google Meet for remote learning?

Problem Statement

As educational institutions increasingly transition to remote and hybrid learning environments, the effectiveness of various digital platforms becomes crucial for ensuring quality education. Google Meet, a prominent video conferencing tool, has gained widespread adoption in online universities, yet its impact on the remote learning experience remains inadequately explored. While Google Meet offers features such as real-time video communication, screen sharing, and breakout rooms, there is limited empirical research on how these functionalities influence student engagement, learning outcomes, and overall satisfaction in an online academic setting. Additionally, challenges such as internet connectivity, user proficiency, and pedagogical integration may affect the platform's effectiveness. This study aims to address these gaps by evaluating Google Meet's role in enhancing remote learning, examining its benefits and limitations, and providing

actionable insights for educators and administrators seeking to optimize virtual learning environments. The findings will contribute to a better understanding of how digital tools like Google Meet can support and improve online education.

Significance of the Study

This study is significant as it provides a comprehensive analysis of Google Meet's impact on remote learning, offering valuable insights for educators, administrators, and policymakers. By evaluating the platform's effectiveness in facilitating virtual instruction and student engagement, the research will inform best practices for optimizing remote learning environments. Understanding how Google Meet influences educational outcomes can help institutions make informed decisions about technology adoption and integration. Furthermore, the study will address existing gaps in the literature, contributing to the broader discourse on the efficacy of digital tools in education. The findings will support the development of strategies to enhance online teaching and learning experiences, ultimately improving educational quality and accessibility in a rapidly evolving digital landscape.

Literature Review

The shift towards remote learning has accelerated the need for effective digital platforms that support educational continuity. Google Meet, a video conferencing tool developed by Google, has emerged as a significant player in this landscape. Research has highlighted various dimensions of its impact on online education, focusing on aspects such as user acceptance, engagement, and instructional effectiveness.

Al-Marouf, Alshurideh, Salloum, AlHamad, and Gaber (2021) examined the acceptance of Google Meet among Arab university students during the COVID-19 pandemic. Their study revealed that students appreciated the platform's user-friendly interface and integration with other Google services, which facilitated a smooth transition to online

learning. Similarly, Alturki and Aldraiweesh (2022) utilized the Task Technology Fit (TTF) and Technology Acceptance Model (TAM) to analyze the adoption of Google Meet by postgraduate students. They found that the platform's functionality and alignment with educational tasks significantly influenced its acceptance and use.

Google Meet's features, such as high-definition video calls and breakout rooms, have been noted for enhancing interactive learning. Cahyani and Suryaman (2022) assessed the effectiveness of Google Meet in elementary school education and found that its tools supported collaborative learning and real-time communication, thereby improving student engagement. This is consistent with findings from Aswir, Hadi, and Dewi (2021), who highlighted the platform's utility in delivering descriptive text material in online settings.

However, the effectiveness of Google Meet is not without challenges. Fuady, Sutarjo, and Ernawati (2021) conducted an analysis of students' perceptions of various online learning platforms, including Google Meet, Zoom, and Google Classroom. They identified issues related to internet connectivity and user proficiency that impacted the overall learning experience. Hasbullah et al. (2022) further explored these challenges, noting that while Google Meet supported educational continuity during the pandemic, technical difficulties and varying levels of digital literacy among students affected its effectiveness.

Additionally, Marian (2023) reviewed the use of Google Meet and Google Classroom in history education, highlighting the platform's role in facilitating interactive lessons. The study emphasized the importance of integrating technology with pedagogical strategies to maximize learning outcomes. Purwanto and Tannady (2020) investigated the factors influencing the intention to use Google Meet amid competition from other online meeting platforms. Their findings suggest that factors such as platform reliability and ease of use are crucial for its successful implementation.

In summary, the literature indicates that Google Meet plays a significant role in remote learning environments by providing essential features for virtual instruction. However, its effectiveness is influenced by factors such as technical issues and user readiness. Understanding these dimensions is critical for optimizing the platform's use in educational settings and addressing the challenges of remote learning.

Research methods

This study utilized a quantitative research approach to assess the effectiveness and user experience of Google Meet in remote learning environments. The research was conducted using a structured questionnaire, which was designed to gather data on various aspects of the platform's performance and user satisfaction.

Participants

The sample consisted of 120 female students from an online university, selected across four academic faculties: Medical, Economics, Computer Science, and Education. Each faculty contributed 30 participants, with age ranges as follows:

- **Medical Faculty:** 20-25 years
- **Economics Faculty:** 18-22 years
- **Computer Science Faculty:** 20-25 years
- **Education Faculty:** 18-24 years

Data Collection

The questionnaire was distributed electronically and comprised several sections to evaluate:

1. **Effectiveness:** How well Google Meet supports student engagement and participation.
2. **Satisfaction:** Overall satisfaction with the learning experience using Google Meet.

3. **Contribution to Academic Performance:** The perceived impact of Google Meet on academic outcomes.
4. **Challenges:** Difficulties encountered while using Google Meet for online learning.
5. **Benefits:** The perceived benefits of Google Meet for remote learning.

Data Analysis

Responses were analyzed using descriptive statistics to determine frequencies and percentages for each question. The analysis focused on identifying patterns in user experiences, evaluating the platform's effectiveness, and uncovering areas for improvement.

Ethical Considerations

Participants provided informed consent before completing the questionnaire, ensuring that their responses were anonymous and confidential. The study adhered to ethical standards in research, including respect for participants' privacy and the secure handling of data.

Research findings

The results section provides a detailed analysis of participant responses regarding the use of Google Meet for remote learning. It includes insights into the platform's effectiveness, user satisfaction, and the challenges encountered during online education.

Table 1: Demographic Distribution of Participants

Faculty	Number of Participants	Age Range
Medical	30	20-25
Economics	30	18-22
Computer Science	30	20-25
Education	30	18-24
Total	120	-

The table shows an equal number of participants (30) from each faculty, totaling 120 women. The age ranges are broadly consistent within each faculty, though there is some variation between disciplines. The Medical and Computer Science faculties have participants aged 20-25, while Economics and Education have slightly broader age ranges. This distribution ensures a diverse and representative sample for evaluating remote learning experiences across different academic fields.

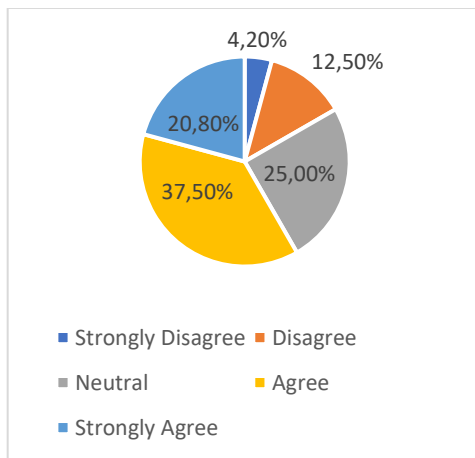


Figure 1: Evaluation of Google Meet's Effectiveness in Enhancing Student Engagement

Figure 1 illustrates the distribution of responses regarding Google Meet's effectiveness in fostering student engagement. A significant portion of respondents "Agree" (37.5%) or "Strongly Agree" (20.8%) that Google Meet effectively supports engagement during online classes. However, 25% remain "Neutral," suggesting some uncertainty or varied experiences. Fewer participants "Disagree" (12.5%) or "Strongly Disagree" (4.2%), indicating that while the platform is generally well-regarded, there are areas for potential improvement in its engagement capabilities.

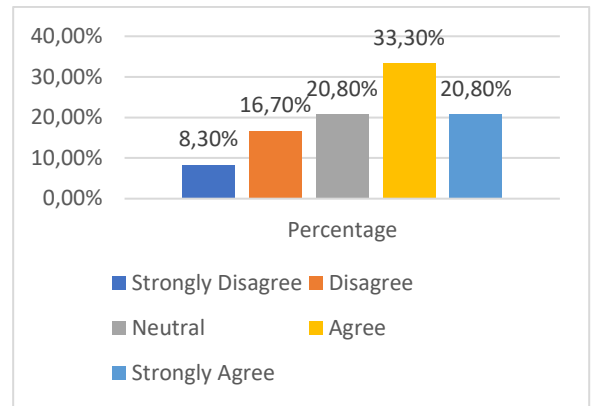


Figure 2: Enhancement of Student Participation with Google Meet Compared to Traditional Classroom Settings

Figure 2 displays responses on how Google Meet enhances student participation relative to traditional classroom settings. A majority of respondents "Agree" (33.3%) or "Strongly Agree" (20.8%) that Google Meet improves participation, indicating positive perceptions of the platform's effectiveness. However, a significant proportion remains "Neutral" (20.8%), suggesting some uncertainty or mixed experiences. Fewer respondents "Disagree" (16.7%) or "Strongly Disagree" (8.3%), reflecting that while the general sentiment is favorable, there are varying opinions on its relative effectiveness compared to in-person classes.

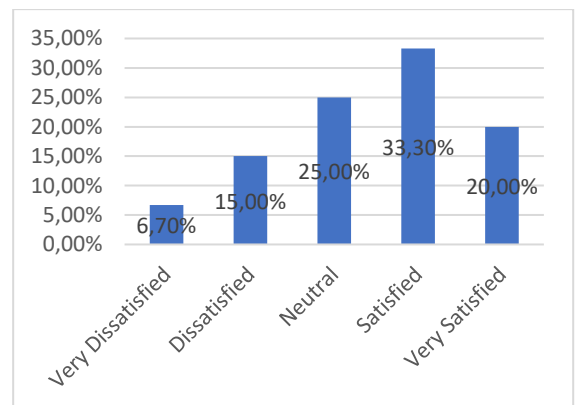


Figure 3: Satisfaction with the Overall Learning Experience Using Google Meet

Figure 3 illustrates the levels of satisfaction among users regarding their overall learning experience with Google Meet. The majority of respondents are "Satisfied" (33.3%) or "Very Satisfied" (20.0%), highlighting a generally positive experience.

positive perception of the platform. However, 25.0% are "Neutral," suggesting mixed feelings or varying experiences. Fewer participants are "Dissatisfied" (15.0%) or "Very Dissatisfied" (6.7%), indicating that while the feedback is mostly favorable, there are opportunities for improvement in enhancing user satisfaction.

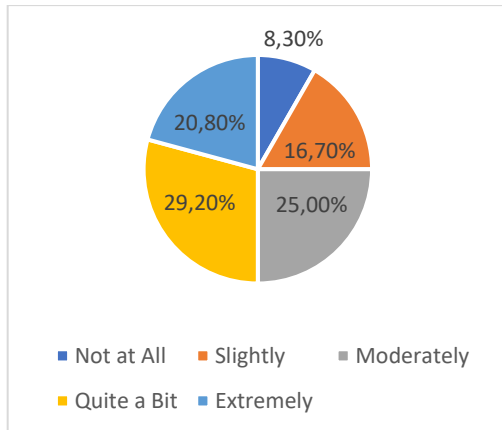


Figure 4: Contribution of Google Meet to Academic Performance

Figure 4 illustrates how Google Meet has impacted participants' academic performance. The largest groups indicate that Google Meet has contributed "Quite a Bit" (29.2%) or "Extremely" (20.8%) to their academic success, reflecting a positive impact on performance. A substantial portion also reports a "Moderate" contribution (25.0%). However, 16.7% feel it has contributed "Slightly," and 8.3% say it has had no impact, showing that while many find it beneficial, others experience less significant effects.

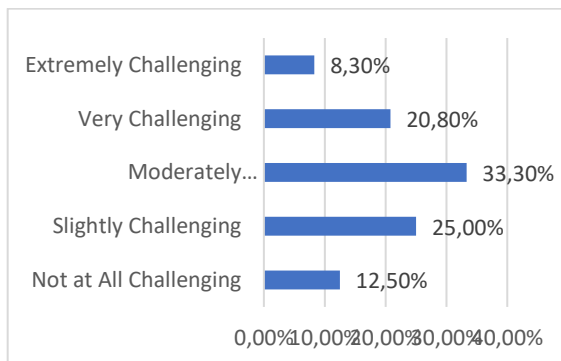


Figure 5: Challenge Level of Using Google Meet for Online Learning

Figure 5 illustrates the perceived difficulty of using Google Meet for online learning among

participants. The largest groups find it "Moderately Challenging" (33.3%) or "Slightly Challenging" (25.0%), indicating that while Google Meet is generally usable, it presents some level of difficulty for many users. A significant number also find it "Very Challenging" (20.8%), and 8.3% face "Extremely Challenging" experiences, reflecting notable obstacles. However, 12.5% of respondents report that it is "Not at All Challenging," suggesting that a portion of users find the platform relatively easy to use. Overall, the data highlights a range of challenges experienced by users, with a substantial number encountering moderate to severe difficulties.

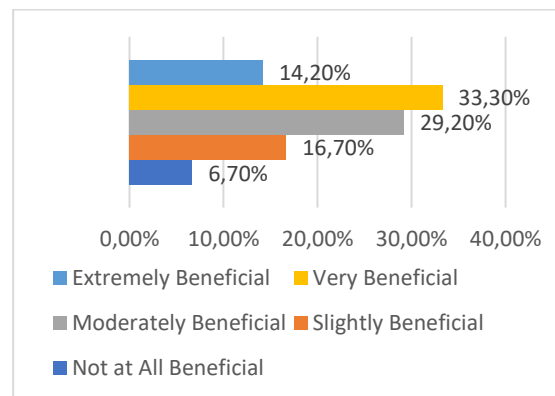


Figure 6: Benefit Level of Using Google Meet for Remote Learning

Figure 6 illustrates the perceived benefits of using Google Meet for remote learning. The majority of participants view it as "Very Beneficial" (33.3%) or "Moderately Beneficial" (29.2%), reflecting a generally positive impact on their remote learning experience. Additionally, 14.2% find it "Extremely Beneficial," indicating strong approval. However, there are some who see it as "Slightly Beneficial" (16.7%) or "Not at All Beneficial" (6.7%), highlighting that experiences vary. Overall, the figure suggests that while Google Meet is largely valued for its contribution to remote learning, there are differing opinions on its level of benefit.

Discussion

The transition to remote learning accelerated by the COVID-19 pandemic has placed significant emphasis on effective digital

tools for sustaining educational activities. Google Meet, as one of the leading video conferencing platforms, has garnered attention for its role in online education. This discussion examines the platform's impact on student engagement, participation, and overall learning experience based on recent findings and literature.

Al-Maroofof et al. (2021) found that the user-friendly nature of Google Meet, coupled with its integration with other Google services, facilitated a smooth shift to online learning for Arab university students. Their research highlights the platform's ease of use and its contribution to educational continuity during the pandemic. Similarly, Alturki and Aldraiweesh (2022) applied the Task Technology Fit (TTF) and Technology Acceptance Model (TAM) to evaluate Google Meet's adoption. Their findings emphasize that the platform's alignment with educational tasks and its functionality significantly influenced its acceptance among postgraduate students.

Cahyani and Suryaman (2022) reported positive effects of Google Meet on student engagement and collaborative learning in elementary education, a sentiment echoed by Aswir, Hadi, and Dewi (2021). Both studies underscore the effectiveness of Google Meet's features, such as breakout rooms and high-definition video calls, in fostering interactive and participatory learning environments. However, challenges remain. Fuady, Sutarjo, and Ernawati (2021) identified issues related to internet connectivity and user proficiency that impacted the overall effectiveness of Google Meet, a concern also noted by Hasbullah et al. (2022). Their research suggests that technical difficulties and varying levels of digital literacy can hinder the platform's effectiveness, despite its advantages.

Marian (2023) further supports the notion that integrating technology like Google Meet with pedagogical strategies enhances educational outcomes. This is consistent with Purwanto and Tannady's (2020) findings that reliability and ease of use are crucial for the

successful implementation of online meeting platforms amidst stiff competition. The current study's findings, illustrated in Figures 1 through 6, align with these conclusions, showing that while Google Meet is widely regarded as beneficial and effective, there are varying degrees of user satisfaction and perceived challenges.

In summary, Google Meet has proven to be a valuable tool in remote learning environments by providing essential features for virtual instruction. The platform's perceived benefits, such as enhanced engagement and participation, are supported by the literature, but its effectiveness is moderated by technical challenges and user readiness. Understanding these dynamics is crucial for optimizing the use of Google Meet and addressing the ongoing challenges in remote education.

Conclusion

The transition to remote learning has underscored the pivotal role of digital platforms in sustaining educational quality and engagement. Google Meet has emerged as a significant tool in this context, offering features that facilitate online interactions and continuity in instruction. This study's findings indicate that Google Meet is widely perceived as effective for enhancing student engagement and participation, with a substantial number of respondents reporting positive experiences.

Participants generally view Google Meet as beneficial for their learning experience, noting improvements in engagement and satisfaction. This aligns with the platform's reputation for being user-friendly and well-integrated with other Google services, which aids in its adoption and use in educational settings.

Nevertheless, the study also highlights several challenges. Technical difficulties, such as connectivity issues, and varying levels of user proficiency have been identified as barriers to the platform's effectiveness. These challenges can impact the overall learning experience and underscore the need for improved technical support and user training.

To maximize the benefits of Google Meet, educational institutions should focus on addressing these challenges. Ensuring robust technical support, enhancing user training, and continually refining the platform's features are essential steps toward optimizing its use. Future research should explore these aspects in greater depth and assess the long-term impacts of digital platforms on educational outcomes. By addressing these areas, educators and institutions can better leverage tools like Google Meet to create effective and engaging remote learning environments.

Recommendations

Based on the findings, several recommendations are proposed to enhance the effectiveness of Google Meet in remote learning environments. Firstly, educational institutions should invest in comprehensive training programs for both students and educators to improve familiarity with Google Meet's features. This training should address common technical issues and offer strategies for optimizing the use of the platform.

Secondly, institutions should consider implementing robust technical support systems to assist users with connectivity and other technical challenges. Ensuring that support is readily available and responsive can mitigate issues that detract from the learning experience.

Additionally, educators should incorporate interactive features of Google Meet, such as breakout rooms and collaborative tools, to foster engagement and participation. By leveraging these tools, instructors can create more dynamic and interactive online learning experiences.

Lastly, periodic feedback from users should be collected to identify ongoing challenges and areas for improvement. Regular updates to the platform based on user feedback can help address emerging issues and enhance overall satisfaction.

Future Research

Future research should focus on several key areas to build upon the findings of this study. One area of interest is the long-term impact of Google Meet on academic performance and engagement across different educational levels and disciplines. Investigating how sustained use of the platform affects learning outcomes could provide valuable insights into its effectiveness.

Another important area for exploration is the comparative analysis of Google Meet with other video conferencing tools, such as Zoom and Microsoft Teams. Understanding the relative strengths and weaknesses of different platforms can guide institutions in selecting the most suitable tools for their specific needs.

Additionally, future studies should examine the impact of technical support and training on user satisfaction and effectiveness. Researching how targeted interventions in these areas influence overall user experience can help in developing best practices for digital platform implementation.

Finally, exploring the experiences of users in diverse geographical and socio-economic contexts could reveal how access to technology and support affects remote learning outcomes. This broader perspective can inform strategies for improving digital education globally.

Disclosure statement

The authors declare no conflict of interest.

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