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A Comparative Analysis Between Using Google Meet and Gather Town Video Conferencing Platforms Viewed from User Experience Using Mecue Questionnaire on Students

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Abstract:

As technology continues to advance, digital platforms like Google Meet and Gather.Town have become essential tools in education, offering opportunities for seamless communication and innovative learning methodologies. The purpose of this study was to determine the comparative results between using the Google Meet and Gather Town video conferencing platforms in terms of user experience using the meCUE questionnaire on students. This research is quantitative research with descriptive analysis and uses comparative study research methods. The data source of this research is SMA Negeri in Malang class X students. Sampling was taken randomly and this research data collection technique adapts from The meCUE questionnaire. The meCUE questionnaire was created based on the Component model of User Experience (CUE) compiled by Thuering & Mahlke. Based on this research, Google Meet and Gather Town platforms have their respective weaknesses and advantages that can be used alternately according to the learning method used by the teacher. The results of this study can be used as a reference in choosing video conferencing applications to be more effective and optimal in the learning process.

Keywords: *meCUE Questionnaire, User Experience, Video conference*

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Introduction

With the evolution of digital technology, digital platforms have become indispensable tools for human survival across various domains, including communication support, assistance in product manufacturing processes, and the provision of seamless services unrestricted by time zones and national boundaries. According to Latifah et al (2022), the internet serves as a prominent illustration, enabling individuals to access and exchange information anytime and anywhere. The context of digital transformation, it extends beyond the mere conversion of information into digital formats; it entails the proficiency to integrate and employ digital technologies seamlessly into everyday life (Latifah et al., 2022). This paradigm shift is not confined to the transformation of physical entities like turning a blackboard into a projector or a book into a PDF; rather, it signifies the capacity to incorporate and leverage digital technologies across various aspects of daily existence. The pervasive nature of digital platforms extends beyond geographic boundaries and time constraints, offering individuals the flexibility to engage with information and services in unprecedented ways.

As digital technology continues to advance, the comprehensive categorization of data becomes increasingly feasible, serving as a valuable decision-making tool. This heightened integration of digital technologies not only holds the potential to elevate performance across a spectrum of industries but also paves the way for the introduction of

innovative quality methodologies and facilitates seamless communication in the digital landscape. While the central focus of digital transformation remains in the education sector, aligning with the ongoing evolution of the education system, it also extends to other domains. Furthermore, educational institutions are afforded the flexibility to customize and adjust the education system in response to current conditions, fostering adaptability and relevance. Those institutions traditionally reliant on face-to-face learning can strategically utilize digital transformation to transition towards a distance learning-based model, embracing the flexibility and accessibility it offers (Latifah et al., 2022). In navigating the landscape of digital transformation in education, the sector encounters both formidable challenges and promising opportunities, with the pivotal involvement of students, teachers, and educational institutions shaping its trajectory. In essence, digital transformation in education not only involves the incorporation of digital devices for learning but also necessitates fundamental alterations in the overall learning system, marking a profound shift in educational methodologies and approaches.

On the other hand, the rapid development of technology also affects the pattern of community interaction (Mashdurohatun et al., 2021). The use of social media, online conversation platforms, online meetings is no longer a new thing and has been heard very often. In education, technological advances and developments can be utilised as a means of supporting and improving the quality of education. Especially if it is associated with the Covid-19 Pandemic that has just passed (Al-Maroof et al., 2020). The use of Google Meet, Zoom and gather Town as a learning tool is common (Singh & Awasthi, 2020).

Video conferencing is a telecommunication technology for simultaneous audio and video interaction between two or more parties in different locations. This virtual programme allows students to engage in synchronous communication with the instructor in asking questions and receiving feedback in real time (Shirley Leo, et al., 2021). There are various video conferencing platforms with various characteristics that can facilitate online learning. One of the video conferencing platforms that is widely used in online learning is Google Meet. Google Meet can be an alternative medium for teaching and learning, socialising with office colleagues or even conducting work meetings from home (Aisyah & Sari, 2021). As time goes by, other applications for virtual meetings continue to emerge, one of which is Gather.Town which was released in 2021 by combining video calls with 2D maps. Gather.Town enables meetings in virtual spaces that simulate real-world communication scenarios where users need to walk up to other users to start a conversation (Shrestha & Rogers, 2021). Although the two applications are both video conferencing applications, they have differences in appearance and features that create different user experiences.

According to the definition of ISO 9241-210: 2019 (2.15), user experience is a person's views and responses based on the use and or things that users anticipate from a product, system, or service. User experience is a subjective perception of the user in using an application. A good and pleasant experience by one user does not necessarily provide the same experience for other users (Hadi et al., 2019). These differences, especially in the use of the Google Meet and Gather Town applications, can be caused by the habit of using an application, how social the environment is around the user, the stability of the network used and also the comfort when using an application (Maricar et al., 2021).

At this time, the use of Google Meet is still more widely used in the world of education, then the Zoom application, and the Gather Town application which is starting to get attention for use in the world of education. The ease of downloading applications and updating applications is still the advantage of Google Meet, with the support of the technology company Google this application gets full support for updates and ease of use. On the other hand, Gather Town also offers a new experience to users, where the application is made with a game-like appearance, so that it can attract the attention of teenagers and children.

The purpose of this study was to determine the comparative results between using the Google Meet and Gather Town video conferencing platforms in terms of user experience using the meCUE questionnaire on students. This research can also be used as a reference for further in choosing video conferencing applications to be more effective and optimal in the learning process.

Research Method

This research is quantitative with descriptive analysis and utilizes the comparative study research method. A comparative study is a scientific research or study based on comparison. According to Aswarni in Arikunto (2002), comparative research aims to discover similarities and differences regarding objects, individuals, work procedures, ideas, criticisms of individuals or groups, and certain ideas or work procedures. Nazir's opinion (2013: 58) explains that it is a type of descriptive research that seeks fundamental answers about cause and effect by analyzing the causal factors or the emergence of a particular phenomenon. Thus, it can be concluded that a comparative study is research aimed at comparing two or more objects to obtain answers or facts about whether there are comparisons or not between the objects under investigation. This research determined the sample using a simple random sampling method. Simple random sampling is selected for populations that are highly homogenous where the members of the research are

randomly selected to participate in the research (Bhardwaj, 2019). To determine the sample size, refer to the Krejcie table, namely with a population of 140, the sample used is 103. This research data collection technique adapts from The meCUE questionnaire, a questionnaire instrument to assess the user experience of a service product such as a website or application. The meCUE questionnaire was created based on the Component model of User Experience (CUE) compiled by Thuering & Mahlke (2007). The results of the data obtained through the meCUE questionnaire on the Google Meet and Gather Town video conferencing platform applications will be analyzed to obtain results that can show the comparison of the two applications. The meCUE questionnaire provides automatic calculations using Microsoft Excel. The following are the hypotheses in this research is H0: There is no difference between using the Google Meet and Gather.Town video conferencing platforms in terms of User Experience using the meCUE Questionnaire for students. Ha: There are differences between using the Google Meet and Gather.Town video conferencing platforms in terms of User Experience using the meCUE Questionnaire for students.

Result and Discussion

The purpose of this study is to determine the results of the comparison between using the Google Meet and Gather Town video conferencing platforms in terms of user experience using the meCUE questionnaire for students. The following is a discussion of the research results based on data analysis and hypothesis testing that has been carried out. Below is Table 1 comparing the results of the average value of the User Experience of the Google Meet and Gather Town video conferencing platforms.

Table 1. Comparison of Average Value Results

Indicator	Value	
	Google Meet	Gather Town
Usefulness	4,67	5,43
Usability	4,58	5,85
Visual Aesthetics	5,00	5,67
Status	4,58	5,70
Commitment	4,00	4,60
Positive Emotions	3,54	3,93
Negative Emotions	3,42	3,43
Intention to Use	3,05	4,47
Product Loyalty	3,02	4,57
Overall Evaluation	3,3	4,6

In the Usefulness indicator, the Google Meet application has a value of 4.67 and the Gather Town application of 5.43. Comparison of the two applications can be concluded that users rate the Gather Town application as more useful than the Google Meet application.

In the Usability indicator, the Google Meet application has a value of 4.58 and the Gather Town application of 5.85. Comparison of the two applications can be concluded that users assess the Gather Town application in its use is easier than the Google Meet application.

In the Visual Aesthetics indicator, the Google Meet application has a value of 5.00 and the Gather Town application is 5.67. Comparison of the two applications can be concluded that users rate the Gather Town application as having a more attractive appearance than the Google Meet application.

In the Status indicator, the Google Meet application has a value of 4.58 and the Gather Town application of 5.70. Comparison of the two applications can be concluded when using the Gather Town application, the user's social status is seen as different than when using the Google Meet application.

In the Commitment indicator, the Google Meet application has a value of 4.00 and the Gather Town application of 4.60. Comparison of the two applications can be concluded that users feel they have a fairly high level of attachment or dependence on the Gather Town application.

In the Positive Emotions indicator, the Google Meet application has a value of 3.54 and the Gather Town application of 3.93. The comparison of the two applications can be explained that users feel they have a higher level of positive emotions when using the Gather Town application than the Google Meet application.

For the Negative Emotions indicator, the Google Meet application has an average value of 3.42 and the Gather Town application of 3.43. The comparison shows results that are not much different from the two applications.

For the Intention to Use indicator, the Google Meet application has a value of 3.05 and the Gather Town application of 4.47. Comparison of the two applications can be concluded that users have a high enough interest to reuse the Gather Town application compared to the Google Meet application.

In the Product Loyalty indicator, the Google Meet application has a value of 3.02 and the Gather Town application of 4.57. Comparison of the two applications can be concluded that users are more loyal to the Gather Town application than the Google Meet application.

In the Overall Evaluation indicator, the Google Meet application has a value of 3.3 and the Gather Town application is 4.6. Comparison of the two applications can be concluded that users feel quite good when using the Gather Town application compared to the Google Meet application.

Based on the results of hypothesis testing using the Paired Sample T-Test, the value of Sig. 0.000, this shows that the Sig. value is smaller than 0.05, then H0 is rejected and Ha is accepted, namely there is a difference between using the Google Meet and Gather Town video conference platforms in terms of User Experience using the meCUE Questionnaire for students.

It can be concluded based on the overall average value and hypothesis testing, Gather Town shows a higher value compared to Google Meet. The results of this study are supported by the conclusions of Latulipe and De Jaeger (2022) who stated that the use of Gather Town allows students to feel more socially connected with their peers while learning online in a way that other video conferencing tools do not which is very important for inclusive learning. In research conducted by McClure and Williams (2021) that students involved in Gather Town meetings showed that they enjoyed using the platform and 86% of student respondents stated that the software was better than other distance learning software, while 29% stated that they preferred using Gather Town over face-to-face meetings. Meanwhile, research conducted by Nur Fitria (2021) states that there are several advantages of Gather Town over other platforms such as Google Meet, which is that Gather Town is not only used for virtual meetings, users feel as if they are playing games and are in a real classroom. Although both are video conferencing platforms, they have differences in appearance and features that certainly create a different user experience.

Conclusion

The conclusion obtained is that the Gather Town application has a better User Experience assessment than the Google Meet application. The overall indicator results on the Gather Town application show an average value of 4.6 where the value is higher than the Google Meet application with an average value of 3.3. Two popular platforms for online meetings, namely Google Meet and Gather.Town, have their strengths and weaknesses. Google Meet offers advantages in features such as microphone, camera, recording, and screen sharing that fulfill the core needs of conducting online meetings. However, the drawback of this application is the limitation on capacity to 100 people in one hour and the requirement to pay for the full service. Meanwhile, Gather.Town takes a different approach by positioning itself not just as a platform for virtual meetings but also as providing an experience as if participants are playing a game during the meeting. Despite presenting a unique atmosphere, Gather.Town has the disadvantage of usage costs, although a free version is available with a two-hour time limit and participation restricted to only 25 attendees. The use of the free version is also limited in its features, and participants cannot wear costumes while using this application. Google Meet and Gather Town platforms have their weaknesses and advantages that can be used alternately according to the learning methods used by the teacher.

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