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The Role of Mentimeter in Increasing Classroom Interaction and Participation

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Abstract

This study investigates the role of Mentimeter in activating students to be more engaged in the Universitas Negeri Makassar Educational Technology Study Program. Utilizing both quantitative and qualitative methods, data were collected from a total of 20 participants (n = 20) through questionnaires, observations, and interviews. The results are that Mentimeter activates students to be more active (50% strongly agree, 40% agree) and freer to respond (55% strongly agree, 35% agree). Interactive features such as polling, word cloud, and anonymous Q&A were rated as engaging by 60% of students strongly agreeing and 30% agreeing. The application in understanding the material was strongly agreed by 45% and agreed upon by 38%, while 12% were neutral and 5% disagreed. Additionally, 58% strongly agreed and 32% agreed that Mentimeter should be adopted by other courses. This study confirms that Mentimeter is able to create a heightened interactive and engaging learning environment despite constraints such as overreliance on internet connectivity as well as educator preparedness.

Keywords : *Active learning, classroom interaction, Mentimeter, student participation.*

INTRODUCTION

Active participation among students and lecturers is one of the most significant elements in creating a good learning environment. When students actively participate in discussions, ask questions, and express their opinions, they not only receive information but also process and construct their own knowledge. Juniarti (2023) emphasizes that effective classroom management largely depends on effective communication between teachers and students. Effective interaction enables students to understand the subject more effectively since they can clarify ambiguous concepts, discuss with colleagues, and receive instant feedback from lecturers. High levels of learning engagement also contribute to high motivation and ownership of the learning experience, hence encouraging students to participate fully in lectures. Therefore, instructors need to implement strategies that engage

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students, either by adopting interactive teaching or the use of interactive technology to enhance their contribution to the learning process.

Passive learning most of the time becomes a stumbling block in terms of enhancing student engagement, particularly in large lecture classes or online courses. Under such circumstances, students simply listen to the explanations of the lecturer with little interaction either with the lecturer or with their fellow classmates. This lack of involvement may be the result of numerous factors, ranging from fear to speak in public, lack of opportunity to contribute to discussions, or restrictions in the media available for online learning. In this way, students become less interactive in learning the material, being mere recipients of information without being actively engaged in the learning process. If left unresolved, this problem will lead to poor conceptual understanding and low learning motivation. Agrifina et al. (2024) emphasize that motivation in learning is needed to improve students' academic performance, where a high level of motivation encourages active involvement and better understanding in the learning process. Therefore, there are methods required for overcoming these challenges through making the classroom setting more interactive and engaging the students more in their own learning.

The majority of students are reluctant to participate verbally in class due to shyness or fear of stating something incorrect. The fears normally arise from a lack of confidence in providing opinions, fear of receiving adverse responses from the lecturer or fellow students, and past negative experiences of public speaking. In addition, in large classes, other students get silent and passive listeners. This can hinder the learning process because interaction and discussion are of critical importance in understanding the material. When students are reluctant to voice their opinions, they may miss opportunities to clarify their understanding as well as develop critical thinking. Therefore, there is a need to use techniques or tools that allow students to overcome these challenges, such as using technology that allows them to interact without having to speak directly in front of the class. Manongga et al. (2021) point out that technology plays an important role in facilitating the teaching and learning process by enhancing accessibility, interaction, and effectiveness in learning.

Certain conventional methods of teaching do not encourage active participation of students. For example, the lecture method, which is still prevalent in university teaching, has the consequence of turning students into passive recipients with little opportunity for interaction. Open class discussions become monopolized by a few vocal students, and the others remain silent and avoid participating. Additionally, in large classes, lecturers may not be in a position to give personalized attention, thus some students may lack the drive to engage in class discussions. Khoiri et al. (2024) claim that effective interaction management within the learning and teaching process has the potential to make the classroom environment more effective and enhance students' understanding of the content. These limitations highlight the importance of creating new teaching methods, particularly through leveraging technology to achieve interactivity and allow every student to take an active part in learning. Quantum Learning emphasizes enjoyable, contextual, and motivating instruction (Sianipar et al., 2025).

The rapid expansion of education technology offers varied innovative options for enhancing student engagement within the classroom. There are various digital platforms at

one's disposal to promote more engaging communications among lecturers and students in face-to-face or distance learning. Nuridayanti et al. (2023) point out that education technology has the capacity to make major contributions towards more flexible learning and student engagement. Technologies such as interactive quiz programs, online surveys, and online forums allow students to engage without fear of public speaking. Additionally, the use of technology in teaching results in more interactive modes of instructions, reducing the degree of monotony and enhancing the motivation of students. Classrooms can also be made more lively, with active participation of every student in learning, with the proper incorporation of technology. Miasari et al. (2022) note that educational technology is a bridge in steering education in Indonesia towards a more advanced trajectory.

Mentimeter is a participatory platform that can be utilized to enhance student participation in learning. Through polls, quizzes, word clouds, and anonymous question-and-answer sessions, Mentimeter provides the student with an opportunity to contribute without fear or hesitation. By means of real-time interaction, the platform supports a more active and inclusive learning process. Wulan and Sulisworo (2023) quote that using Mentimeter in learning enhances classroom interaction by providing the students with opportunities to engage actively by means of its participatory attributes. In addition, Mentimeter gives instructors immediate feedback from students, thereby allowing them to modify teaching methods for greater effectiveness. This incorporation can be a remedy to stimulate student participation and enhance classroom interaction quality. Nasution and Anas (2022) find that employing Mentimeter as a learning platform benefits student learning outcomes.

Interaction in the process of learning plays a vital role in enhancing students' understanding, involvement, and motivation. When the students actively participate by discussing, asking open questions, or reacting to what is being presented, they tend to achieve better conceptual understanding. Moreover, effective interaction between students and lecturers can yield greater learning patterns where students are openly free to express themselves. Therefore, it is important for instructors to embrace means that ensure active participation in the learning process, either by direct interaction or technology.

Active classroom participation is a central indicator of successful learning, but it is not an easy thing for teachers to promote increased participation. Active learning has the potential to boost student engagement, which in turn will result in higher understanding and better retention of course material, as stated by Kasi (2023). Student attribute diversity and confidence levels are among the main challenges. Some of the students are more participative in discussions, whereas others either don't participate or don't want to share their views as they fear mistakes or lack confidence. Furthermore, less interactive teaching methods also prove to be an obstruction. If instructors merely read out lectures without providing any opportunity to the students to engage in the discussion or ask questions, student involvement in learning is maintained at a minimum level. The use of technology and innovative pedagogies such as group discussion, interactive tests, and gaming can be potential solutions for engaging students.

Classroom environmental conditions also have a significant part to play when it comes to student participation. A poor classroom environment, such as one that is too formal or lacks an atmosphere of warmth between teachers and students, is likely to

demotivate students from participating. Creating a inclusive learning environment in which students are made to feel valued and to participate is key in promoting participation. Motivation of the student is also crucial in participation. Less motivated students are passive and lack interest in participating in discussion or learning activities. Demmanggasa et al. (2023) state that digitalization of education plays a significant role in accelerating digital literacy among students through the application of various educational technologies, which enhances the process of education to be more interactive and accessible. Therefore, teachers ought to look for ways of creating interest in learning, e.g., making lessons relevant to day-to-day experiences, respecting student feedback, and creating challenging, engaging assignments. By addressing these challenges, classroom student participation can be improved, thereby enriching the learning process with dynamics, interaction, and relevance.

In the era of digital technology, technology is one of the most important factors in enhancing classroom interactions. Subandowo (2022) explains that education technology in the era of Society 5.0 is required to render the learning process more interactive and adaptive. There are several technological innovations that have rendered learning more interactive, collaborative, and engaging for learners. One of the most important benefits of technology in education is that it has the ability to bridge communication gaps among students and educators. Sadriani et al. (2023) point out that the role of teachers in designing educational technology in the era of the digital revolution has a significant contribution to creating a more effective and engaging learning process. Through the use of digital learning platforms, such as Learning Management Systems (LMS), interactive quiz applications, and online discussion forums, students can participate more in the learning process both within the classroom and outside of school.

In addition, technology enables more flexible learning style adapted to student needs. Use of visual media like video learning, simulations, and augmented reality (AR) and virtual reality (VR) can offer easy explanations of complex ideas. Technology also enables project-based learning strategies and online forums, which can enhance student participation and collaboration. By utilizing technology appropriately, classroom interactions are enhanced, resulting in a better and more significant learning experience for students.

Throughout the learning process, student engagement and interaction are key factors that determine the quality of material presentation. Among the technologies being increasingly used to enhance student engagement is Mentimeter, an interactive web-based platform that accommodates students to participate in real-time response through their own devices. Khan (2025) posits that Mentimeter helps to promote greater student engagement by providing interactive resources that allow active participation in the learning process. The use of Mentimeter in the classroom makes learning more engaging, as students can respond to quizzes, express their opinions through polls, and participate in discussions without fear. With word clouds, multiple-choice, and anonymous question and answer, typically passive students are permitted to freely contribute without embarrassment or fear.

The positive impact of using Mentimeter is manifest in the increased level of student engagement in class discussions and exercises. The website provides every student an equal opportunity to engage, thus learning does not become the preserve of just those who talk.

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In addition, through interactive data visualization and instant feedback, students are more likely to be engaged in the learning process. However, some issues should be considered, such as dependence upon access to the internet and preparedness of lecturers to use Mentimeter in combination with effective pedagogies. With effective application, Mentimeter has the potential to be an effective means to facilitate student participation and engagement, providing a more inclusive, collaborative, and engaging classroom. Mohin et al. (2022) state that classroom uses of Mentimeter have the potential to enhance the process of teaching and learning by activating the classroom community.

Its use in learning has been noted to increase learner participation by presenting a more engaging and interactive process of learning. Ranjbaran et al. (2023) say that the introduction of Mentimeter into the class can enhance interaction and participation from learners through its various interactive attributes. Among the primary areas which become more interactive is classroom interaction, where students can participate in polls, quizzes, or anonymous Q&A. This allows anyone, including traditionally passive students, to respond with their opinion or answer questions freely. Also, mental effort is increased with features such as word clouds, multiple choices, and open answers, which induce students to analyze and organize their knowledge of the topic. Co-working becomes more active as students can share thoughts immediately and observe peers' opinions in real-time. By fast and interactive visualizing of results, Mentimeter creates a more innovative, dynamic, and inclusive learning experience, which allows better comprehension of concepts and active student involvement in the learning process.

The aim of this research is to investigate the role of Mentimeter in enhancing interaction and participation in class. As technology continues to evolve in education, active student engagement has become an essential factor in creating effective learning. Salamah et al. (2022) believe that student-teacher interaction is crucial, as it can increase student engagement and understanding of the material being taught. Therefore, in this study, how the use of Mentimeter as an interactive tool can facilitate communication between teachers and students, boost response during class discussions, and conquer participation barriers, especially for those students with no confidence to express themselves in class, is analyzed.

METHOD

Participants / subject / population and sample

This study was conducted at Makassar State University, in the Educational Technology Study Program. The participants of this study were 20 students who underwent the learning process using Mentimeter as an interactive tool. The participants were chosen based on their involvement in courses on technological innovations in education so that they could provide profound experiences and insights into the use of Mentimeter in learning. During the study, students participated in various interactive sessions developed to evaluate their level of interaction and participation in class. In doing so, the study aims to examine the effects of Mentimeter in enhancing the engagement of students and the issues and benefits of implementing it in higher education classroom environments.

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Instruments

This study employed several instruments in collecting data about how effective Mentimeter is in enhancing student interaction and participation in class. The primary instrument employed was a questionnaire to determine the degree of student engagement before and after using Mentimeter. The questionnaire touched on aspects of the ease with which students participate, the frequency with which they were engaged in discussions, and how they found Mentimeter to be in terms of effectiveness in enhancing classroom interaction. Besides the questionnaire, direct observation was also employed in this research throughout the learning session. Observation was conducted to record students' responses towards the usage of Mentimeter, including their active participation, receptiveness to answering questions, and interaction with classmates and lecturers. To complement the data further, interviews were conducted with some of the lecturers and students to gain more insight into their experience using Mentimeter. By combining these instruments, the study aimed to obtain more accurate and comprehensive data on the impact of Mentimeter in learning.

Table 1. Summary of Participants and Research Instruments

Aspect	Description
Participants	20 students from the Educational Technology Study Program
Data Collection Methods	Questionnaire, Observation, Interview
Questionnaire Focus	Engagement level, participation ease, effectiveness perception
Observation Focus	Active involvement, responsiveness, peer-lecturer interaction
Interview Focus	User experience, perceived impact, feedback for improvement

Data analysis procedures

The information gathered during this study were analyzed using quantitative and qualitative procedures to ascertain the impact of Mentimeter on learner participation and learning interaction. The quantitative data gathered from the questionnaire were analyzed using percentage-based descriptive statistics to identify trends in learners' engagement after the use of Mentimeter. Meanwhile, thematic analysis, classifying responses from students and lecturers under significant themes of increased interaction, motivation to learn, and challenges faced in using Mentimeter, was used to analyze qualitative data from interviews and observations. An integration of the two analyses is provided in this study for evaluating the effectiveness of Mentimeter in fostering a more interactive and inclusive learning environment at Universitas Negeri Makassar.

FINDINGS

The results of this study reveal that the use of Mentimeter significantly enhances student interaction and involvement in learning within the Educational Technology Study Program at Universitas Negeri Makassar. Based on data analysis from the questionnaire, most students replied that they felt more comfortable participating in class discussions using Mentimeter compared to traditional practices. The number of students actually

responding to lecturers' questions during class increased substantially after using this platform, thereby increasing interaction throughout the learning process.

Apart from that, observation results showed it enabled setting up a dynamic and inclusive learning environment, for example, making use of features such as word clouds, polls, and anonymous Q&A. Previously passive students were very encouraged to provide input since they were allowed to contribute their opinions without fear. Interviewing many students revealed how Mentimeter optimized participation levels, while allowing students to enjoy a more enjoyable and interactive learning environment. However, there were some noted challenges, too, such as reliance on internet connectivity and willingness on the side of lecturers to include such technology in learning strategy. Nevertheless, this study attests to the reality that Mentimeter can actually be employed to promote student engagement as well as a more interactive learning environment.

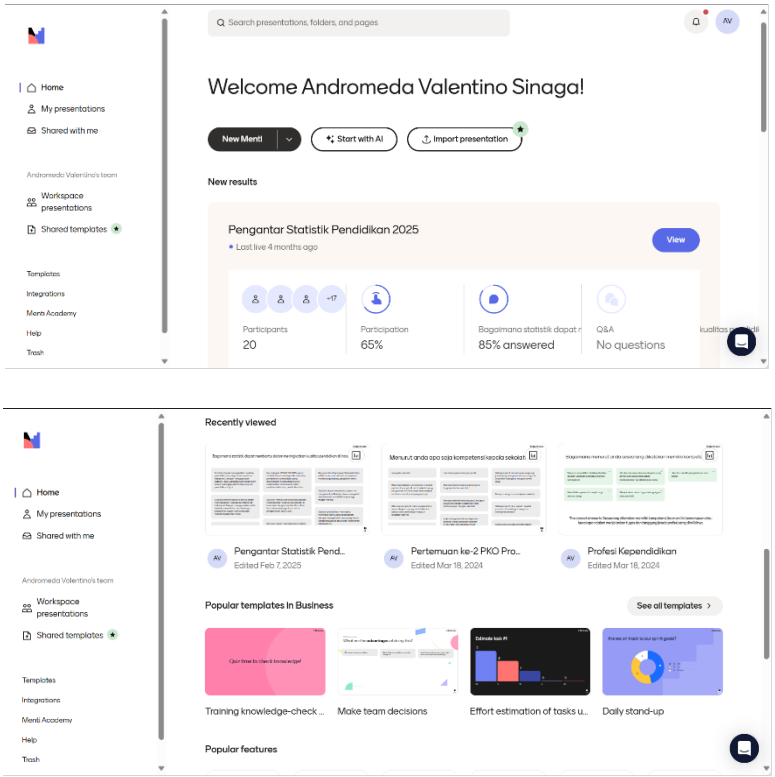

Figure 1: Mentimeter dashboard interface

Table: 2 Analysis of the Questionnaire Results on the Use of Mentimeter in Learning

No	Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
1	Mentimeter helps me be more active in class.	50%	40%	7%	3%	0%
2	I feel more comfortable participating with Mentimeter.	55%	35%	8%	2%	0%

3	Mentimeter's interactive features make learning more engaging.	60%	30%	8%	2%	0%
4	Mentimeter enhances my understanding of the material.	45%	38%	12%	5%	0%
5	The use of Mentimeter should be implemented in other learning sessions.	58%	32%	8%	2%	0%

Increase in Classroom Activity

50% of the students strongly agreed, and 40% agreed that Mentimeter made them more active in class. 3% disagreed, and there were no strong disagreements. That is, the majority of students indicated increased levels of learning engagement when applying Mentimeter.

Comfort in Participation

55% strongly agreed, and 35% agreed that they preferred to use Mentimeter. Only 2% disagreed, and none strongly agreed.

These results show that Mentimeter is useful in crossing participation barriers, especially for students who can feel less confident of participating directly during classes.

Engagement in Learning

60% of the students strongly agreed and 30% agreed that the interactive features of Mentimeter enhanced learning engagement. 2% disagreed only, and none strongly disagreed. This means that Mentimeter can create a more lively and engaging learning space.

Understanding of the Material

45% of the students agreed strongly and 38% agreed that Mentimeter improved their understanding of the subject matter. Nevertheless, 12% were neutral and 5% disagreed.

While the majority of students believed it was useful, others opined that Mentimeter had not fully improved their understanding of the subject.

Application of Mentimeter in Other Courses

58% of the students agreed strongly and 32% agreed that Mentimeter needs to be implemented in other learning settings. Only 2% did not agree, and no one disagreed strongly. This indicates that the students overall prefer the use of Mentimeter across various courses.

From this criticism, it can be understood that Mentimeter impacts student participation and engagement in the learning process positively. It becomes more active and comfortable to engage most of the students, as well as more engaged in learning through interactive functionalities offered by Mentimeter. However, some students also feel that Mentimeter has not improved the knowledge of the subject matter properly.

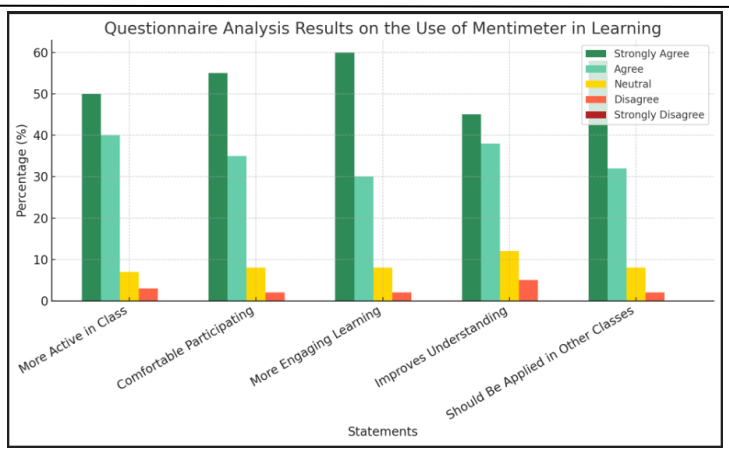

Figure 2: Analysis results on the use of Mentimeter in learning

The above chart indicates the percentage of respondents to each statement as per measures Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. The dominance of the green hues (Strongly Agree and Agree) indicates that the greater part of the students discovered Mentimeter as an effective device to make studying easier, participative, and interesting and consequently enhanced their control over the substance.

Table 3. Participant Quotes

Theme	Description	Participant Quote
Increased participation through anonymity	Anonymous features encourage students to respond more confidently	*"I feel more confident answering because I don't have to worry about being wrong. My name doesn't show."* (Student 3)
Interactive and enjoyable learning	Polling and word cloud features make learning more engaging	*"When the lecturer used the word cloud, it felt like a game – it made me want to join in."* (Student 8)
Improved lecturer-student communication	Lecturers gain insight into students' prior understanding	***"The polling at the beginning helps me realize what I already know and what I still need to learn."*** *(Student 5)*
Technical limitations and user readiness	Internet issues and unfamiliarity with the tool remain challenges	"At first, I had to explore the features before I could use them confidently." (Student 7)

DISCUSSION

The findings of this study indicate that the use of Mentimeter can significantly enhance classroom interaction and student participation in the Educational Technology Study Program at Universitas Negeri Makassar. The results of the questionnaire analysis indicate that the majority of the students become more active and feel freer to participate in class discussions when using Mentimeter. These findings are aligned with previous

research, which emphasizes the potential of interactive learning technologies to increase student engagement and create a more interactive learning experience. One of the major reasons for such a successful outcome is that Mentimeter is an interactive tool. Features such as live polls, word clouds, and Q&A sessions provide the students with an arena to offer their ideas anonymously without fear, thus resulting in increased participation especially by the students who would never utter a word in a standard classroom setting. This point of argument can use evidence to enhance the fact that technology can help bridge the passive and active learning gap, hence facilitating more participative discussion.

In addition, the findings show that Mentimeter is able to boost students' understanding of course material. With its capacity to provide immediate feedback and responses, teachers can easily probe students' comprehension and adjust their instructional strategies accordingly. This aligns with the principle of student-centered learning, where learners are given additional opportunities to be involved, reflect, and learn interactively from the content. However, because of its strengths, there were some drawbacks when applying Mentimeter. A very small number of students were neutral or disagreed that it was effective, which is maybe because of technical limitations such as slow internet or no prior experience with the app. Moreover, the effectiveness of Mentimeter also lies in the ability of the teacher to integrate it into lesson plans. If not with training and systematic deployment, the students would not be able to maximize its potential.

Overall, this study reinforces the idea that interactive digital software like Mentimeter can significantly encourage student participation and engagement. However, for optimal results, educators must ensure effective technology integration in teaching methodologies and remove possible technical barriers. Additional research can examine how the use of Mentimeter can be optimized for different academic courses and types of students in order to more effectively enhance classroom interaction and learning outcomes.

Limitations and Suggestions for Future Research

This study was conducted at Universitas Negeri Makassar and involved a relatively small sample size of only 20 participants, which may limit the generalizability of the findings to broader student populations. Additionally, the effectiveness of Mentimeter relied heavily on stable internet connectivity, which posed a challenge for some students during the sessions. Future research could involve a larger and more diverse participant group across multiple universities to increase external validity. It is also recommended to explore hybrid or offline-compatible interactive tools, and to investigate the long-term impact of such platforms on student learning outcomes and engagement patterns.

CONCLUSION

In regard to results gotten from research, Mentimeter adoption has been helpful in escalating classroom engagement and active involvement among learners. The learning management system offers a platform where learners are able to give feedback without room for shyness or embarrassment due to functionalities such as polls, quizzes, word clouds, and anonymous Q&A forums. Where interactions within class are enhanced with heightened engagement, the learning environment is also more interactive and more engaged on the learners' side. In addition to this, Mentimeter allows the lecturers to assess students' understanding in the moment and make teaching strategies better suited to them.

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Therefore, integrating interactive technology like Mentimeter into learning could be a modern way of optimizing students' involvement and creating a more effective learning experience.

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