

Students' Perceptions of The Development of Digital Learning Platforms In Supporting The Learning Process

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Abstrak

This study explores students' views on how digital learning platforms support their learning process. Data were collected through a Likert-scale survey consisting of 10 items, using a 5-point scale ranging from Strongly Disagree to Strongly Agree. The survey was administered to 50 seventh-semester students at Universitas Negeri Makassar, selected purposively due to their extensive experience with online and blended learning. Descriptive analysis was used to calculate mean scores and frequency distributions. Over 80% of respondents reported that digital platforms were particularly helpful in accessing learning materials and communicating with lecturers. Perception scores ranged from 3.8 to 4.4, with ease of accessing resources scoring the highest. In contrast, motivation received the lowest score, suggesting that technology alone may not sufficiently drive student engagement. These findings emphasize the need to optimize both digital platforms and pedagogical strategies to sustain motivation and foster deeper learning. The results imply that higher education institutions should integrate more student-centered and interactive approaches within digital environments.

Keywords: Digital learning platforms, Learning motivation, Student perceptions

INTRODUCTION

With the rapid advancement of technology, the education sector has experienced significant transformation. In the era of Society 5.0, the integration of advanced technology in educational management systems is essential to ensure effective and efficient learning (Khoiriah et al., 2023). One of the most notable changes is the shift in how learning occurs. Traditional learning, once centered around physical classrooms and face-to-face interaction, is now evolving into a more flexible, technology-driven experience. Digital tools have redefined learning as an activity that can occur beyond the boundaries of time and space, offering more interactive and personalized opportunities. As Permana et al. (2024) argue, technology-based instructional media have proven effective in

enhancing both learning quality and student engagement.

The COVID-19 pandemic, which emerged in early 2020, drastically altered many aspects of life, including education. In a short time, institutions were forced to shift from face-to-face instruction to fully online formats. This urgent transition accelerated the use of educational technologies, even in institutions previously unfamiliar with digital integration. Suryatni (2021) highlights that educational technology became a crucial system during the pandemic, enabling continuity in learning despite physical restrictions. Although the rapid shift posed numerous challenges, it also normalized the use of digital platforms as essential tools in the learning process.

Despite the successful adaptation during the pandemic, several challenges persisted. Hatmo (2021) notes that students faced technical barriers and a lack of motivation, which affected the effectiveness of online learning. These issues underscore the importance of understanding how technology is implemented and its actual impact on student engagement and learning outcomes. As institutions gradually return to face-to-face or hybrid models, the lingering effects of these challenges remain relevant.

Even as normalcy resumes, many universities continue to implement online or blended learning approaches. This persistence is driven by both the practicality of digital tools and the increasing digital literacy among students and lecturers. According to Deri Wanto (2023), the pandemic acted as a catalyst for educational innovation, especially in how technology is embedded into the learning process. However, the long-term implications of this transformation require deeper investigation. Understanding how these technologies influence teaching practices, student autonomy, and the quality of learning remains a pressing concern highlighting the urgency of this study.

With the speed of technology growth, numerous digital learning platforms have continued to emerge to improve in quality. Google Classroom, Moodle, Zoom, Microsoft Teams, and other platforms have now become a part of students' school life. According to Pratomo and Wahanisa (2021), using Learning Management System (LMS) technologies during the pandemic period became a fundamental approach to ensure continuity in

online learning processes. These websites certainly offer numerous conveniences, ranging from more convenient access to course materials and faster communication between lecturers and students, to more diverse digital learning experiences. However, behind these conveniences lie new problems. Students have to learn to adapt quickly, time-manage independently, and understand many technological elements that are not user-friendly by nature. That is, the development of digital learning technologies brings not merely technical implications but also influences students' learning habits and psychological readiness in adapting to the changes.

In university education, the students become the focus as the immediate consumers of various digital learning platforms. Hasanah et al. (2022) argue that information technology advancement has played a significant role in how students receive and process information. Through every access to content, participation in online discussions, or attendance of virtual lectures, they gain significant firsthand experiences. These experiences put students in a good position to ascertain the degree to which such platforms support their learning needs. Student opinions and perceptions are realities of technology use in their daily academic lives. Hidayat et al. (2025) state that digitalization serves as a significant solution to fight various managerial and teaching problems in higher education. As such, there is a necessity to give space for their voices. On the part of the students, it becomes more convenient to identify what is

going right with digital learning systems and where they still need enhancement.

The general question this research seeks to determine is: what do students have to say regarding the institution of digital learning platforms in enhancing their learning process? As immediate consumers, students' perspectives must be grasped. Their hopes extend beyond the usability or difficulty of managing the technology also the extent to which these sites actually assist one in understanding course content, facilitate interaction with teachers and peers, and maintain motivation within a more digitalized learning environment. According to Andi Kambau (2024), digitalization in Indonesian higher learning institutions is a complex but urgent process, particularly in efforts to increase the quality and effectiveness of education services. Through discussing students' experience and perspectives, this research aims to offer a more realistic picture of both benefits and pitfalls they are confronted with in digitally mediated learning.

This study aims to unveil and clarify how learners comprehend the development of online learning platforms used through their entire learning journey. Through deeper inquiry into their perspectives and experiences, this study aims to be more informative on the degree to which the platforms meet the learning needs of students. These results are significant in order for further targeted and aligned future development and utilization of education technologies with students' expectations, real experiences, and problems at hand in practice. Fricticarani et al. (2023) point out that

adaptive and innovative teaching approaches are required to meet the demands of the Technology 5.0 era.

This study is anticipated to bring benefits at both theory and practice levels. At the theoretical level, outcomes can contribute meaningfully to enrich the body of knowledge regarding the effectiveness of online learning systems within higher education. Outcomes might also enhance the body of knowledge regarding the role of technology in enabling the learning process more efficiently, particularly within the dynamic process of digital in higher education.

METHOD

This study employs a quantitative descriptive research design with a survey approach, chosen for its ability to systematically capture and quantify students' perceptions regarding the development of digital learning platforms. This approach is deemed appropriate as it enables researchers to obtain a general overview of student responses through numerical data, facilitating a clearer interpretation of trends and tendencies in digital learning experiences.

The study focuses on seventh-semester students at Universitas Negeri Makassar, specifically those currently working on their final projects and who have participated in both online and blended learning formats. These students were selected through purposive sampling, as their advanced academic stage implies a broader and more mature exposure to various digital learning

platforms, allowing them to provide reflective and nuanced evaluations.

A total of 50 respondents met the inclusion criteria: completion of at least seven semesters and experience with digital platforms in their coursework. Data were collected through a 10-item Likert-scale questionnaire, measuring students' perceptions across several dimensions such as ease of use, functionality, user comfort, and the platforms' role in supporting understanding and engagement in the learning process. The instrument employed a five-point scale: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree.

Prior to data collection, content validity of the instrument was established through expert judgment involving two instructional technology lecturers and one language education expert, ensuring the clarity, relevance, and alignment of the items with the constructs being measured. To test reliability, the instrument was piloted on a group of 20 students with similar characteristics, resulting in a Cronbach's Alpha coefficient of 0.87, indicating high internal consistency.

Data analysis employed descriptive statistics, including mean scores and percentage distributions to identify trends in student responses. The results were presented in tabular and graphical formats to provide a comprehensive visual summary of perceptions toward digital learning platforms. These findings were then contextualized within broader discussions on digital transformation in higher education

RESULT AND DISCUSSION

The aim of this study is to explore students' perceptions regarding how the development of digital learning platforms supports their learning process. Data were collected from 50 seventh-semester students at Universitas Negeri Makassar, all of whom are currently working on their final projects and have participated in online or hybrid learning through various digital platforms. A 10-item Likert-scale questionnaire was employed as the research instrument.

The data collection instrument consisted of a 10-item Likert-scale questionnaire, specifically constructed by the researchers based on relevant literature and pedagogical frameworks. The Likert scale ranged from 1 (Strongly Disagree) to 5 (Strongly Agree), measuring four key variables: ease of use, platform functionality, user comfort, and the perceived role of platforms in supporting comprehension and student engagement.

Descriptive analysis reveals generally positive perceptions. Mean scores across the ten items ranged from 3.8 to 4.4 on a 5-point scale, indicating overall agreement that digital platforms contribute positively to the learning experience. The highest-rated item was "*I believe that the presence of digital platforms makes it easier for me to obtain course materials*" ($M = 4.4$), suggesting that accessibility of resources remains a primary benefit valued by students. However, the lowest mean score was observed on the item "*I feel more motivated to learn with continuously developing learning platforms*" ($M = 3.8$). While this still reflects a favorable

response, it implies that ease of access and technological advancement do not automatically translate into higher learning motivation. This may indicate a lack of deeper pedagogical engagement or insufficient interaction design that supports intrinsic motivation. The finding underscores the need for instructional strategies that go beyond content delivery and foster active, meaningful learning experiences.

Pedagogically, this highlights the importance of integrating motivational elements into digital learning environments, such as interactive tasks, timely feedback, and personalized learning pathways. Without these, students may perceive digital platforms as efficient but emotionally disengaging. Thus, while technological infrastructure has evolved, it must be accompanied by learner-centered design to sustain motivation and promote deeper engagement.

Table 1. Recapitulation of the Average Scores of Students' Perceptions on the Development of Digital Learning Platforms

No	Statement	Average Score (1-5)	Category
1	The current digital learning platforms have developed more compared to several years ago.	4,2	Agree
2	I feel the development of digital platforms makes it easier for me to access lecture materials.	4,4	Strongly Agree
3	The interface of current learning platforms is more user-friendly and comfortable to use.	4,1	Agree
4	New features on the learning platforms help me study more effectively.	4,0	Agree
5	Digital learning platforms facilitate communication with lecturers and classmates.	4,3	Agree
6	The development of learning platforms supports me in managing my study time flexibly.	4,2	Agree
7	I feel more motivated to learn with the continuously developing learning platforms.	3,8	Somewhat Agree
8	Current platforms enable more interactive learning compared to before.	4,0	Agree
9	I can understand lecture materials better thanks to the features in the learning platforms.	4,1	Agree
10	Overall, I feel helped by the development of digital learning platforms.	4,3	Agree

Score Category Description:

4,20 – 5,00 : Strongly Agree

3,40 – 4,19 : Agree

2,60 – 3,39 : Neutral

1,80 – 2,59 : Disagree

1,00 – 1,79 : Strongly Disagree

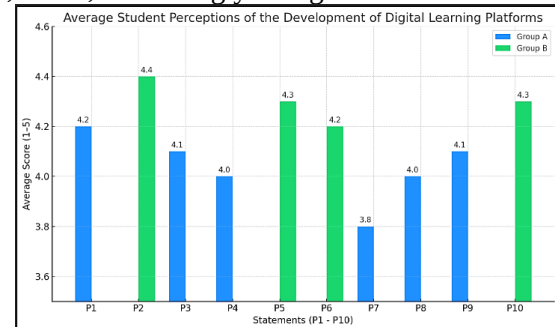


Figure 1. Bar chart showing the average student perception scores on the development of digital learning platforms.

The following bar chart illustrates the mean student scores for ten statements of the evolution of digital learning platforms. Each statement (P1–P10) is represented by one bar, and the height of each bar represents the mean student rating from Likert scale 1 to 5. Average ratings for all statements except two or three were more than 4.0, reflecting that most students agree or strongly agree that the evolution of digital platforms facilitates their learning process. This concurs with Sakti (2023), who argued that utilisation of digital technology to teach can enhance the quality of interaction between teachers and learners, as well as expand learning content accessibility.

Statement P2 "access to course materials" had the highest score of 4.4, indicating that it is the most experienced benefit among learners that ease of access is most perceived. On the contrary, statement P7, which addressed "learning motivation," had the lowest score of 3.8. The same can be understood as a perception that even though it is understood to be technically beneficial

particularly with regard to access and flexibility of time the impact on learning motivation remains limited. Based on the findings, one can argue that students embrace the development of digital learning platforms, particularly in rendering the process more efficient and convenient.

Table 2. Percentage Distribution of Student Responses to Each Statement

No	Statement	SD	D	N	A	SA
1	The current digital learning platforms have developed more compared to several years ago.	0%	2%	10%	58%	30%
2	I feel the development of digital platforms makes it easier for me to access lecture materials.	0%	0%	6%	48%	46%
3	The interface of current learning platforms is more user-friendly and comfortable to use.	0%	4%	12%	56%	28%
4	New features on the learning platforms help me study more effectively.	2%	4%	18%	50%	26%
5	Digital learning platforms facilitate communication with lecturers and classmates.	0%	2%	6%	56%	36%
6	The development of learning platforms supports me in managing my study time flexibly.	0%	4%	10%	54%	32%
7	I feel more motivated to learn with the continuously developing learning platforms.	2%	8%	24%	46%	20%
8	Current platforms enable more interactive learning compared to before.	2%	2%	20%	52%	24%
9	I can understand lecture materials better thanks to the features in the learning platforms.	0%	2%	18%	56%	24%
10	Overall, I feel helped by the development of digital learning platforms.	0%	0%	8%	54%	38%

Abbreviation Key:

SD: Strongly Disagree

D: Disagree

N: Neutral

A: Agree

SA: Strongly Agree

Research Limitations

Although this study offers valuable insights, its findings are limited by the small and specific sample 50 seventh-semester students from one university making

generalization to broader populations less certain. The purposive sampling may also introduce selection bias, as the experiences of students at different stages or from other fields might vary. Additionally, since data were collected through self-reported questionnaires, responses could be influenced by perception bias or momentary impressions. These limitations highlight the need for broader samples and more diverse methods in future research to deepen understanding of digital learning platforms in higher education.

The results of the study reveal that, in general, students are positive towards the creation of digital learning platforms, as indicated by a relatively high overall average score on most indicators. It is, however, important to delve deeper into how these outcomes reflect the true dynamics of the learning process and link them to relevant theory and previous research.

First, the positive sentiment towards ease of access to course material through online platforms (with a mean score of 4.4) validates findings from prior research emphasizing accessibility as the key element in effective application of e-learning (Ally, 2008; Bates, 2015). Access to course content online enables students to study at their own pace, aligned with the provisions of self-directed learning under the andragogical model.

Second, high scores on aspects related to ease of communication and time management reflect that online settings help build connectivity and leave students with greater control over learning processes. This aligns with Jonassen's (1999) Constructivist

Learning Environments theory, reinforcing learning environments that support social interaction and self-regulation of learning. Discussion boards, live chat, and integrated academic calendars are some components that contribute to these features.

However, the statement related to learning motivation had the lowest ranking (average score of 3.8), suggesting that technological advancement alone does not necessarily increase students' learning motivation. This is in line with Self-Determination Theory (Deci & Ryan, 2000), which holds the stance that motivation cannot be directly caused by learning devices, but other factors such as autonomy support, quality interpersonal relationships, and perceived competence. To this end, online platforms should be seen as part of a more complex system of learning.

In addition, while students gave high marks to interactive features on online platforms (average score 4.0), these were not the highest-rated features. This may indicate that, while there are interactive tools, they are not yet being maximally utilized or fully appreciated by students. This offers an opportunity for the higher education sector to not only deploy the requisite technology, but also increase training and instructional design to support significant interactivity in virtual learning environments. As noted by Yusra and Sesmiarni (2025), optimal use of digital platforms can be a helpful method of improving the quality of education during the digital transformation period.

Generally, the findings validate that the adoption of digital learning platforms cannot

be seen solely from a technological perspective, but also from a pedagogical point of view. The positive attitudes of the students demonstrate willingness to the digitalization of education. However, success in its adoption greatly depends on the combination between technology, effective learning strategies, and active cooperation of both lecturers and students

CONCLUSION

The findings indicate that students generally perceive digital learning platforms positively, with mean scores ranging from 3.8 to 4.4 on a 5-point scale. Features most valued include ease of access to learning materials, flexibility in scheduling, and improved communication with lecturers factors that have demonstrably enhanced the learning process. However, a lower average score on the motivation-related item suggests that technological features alone are insufficient to foster sustained student engagement. This highlights the need for digital platforms to be paired with pedagogical innovations that promote active learning, personalization, and meaningful interaction.

From a practical standpoint, platform developers should focus on integrating features that support student autonomy and collaboration. Lecturers are encouraged to adopt instructional strategies that humanize the digital classroom, such as feedback loops and participatory learning models. Institutions should also craft policies that support blended learning environments and provide training

for educators to maximize the pedagogical potential of digital tools.

To address this, platform developers should prioritize more interactive and personalized features. Universities need to provide adequate infrastructure and continuous training. Lecturers, in turn, are encouraged to design online instruction that is more student-centered and dialogue-driven. With collaboration among all stakeholders, digital learning can evolve into an experience that is not only practical, but also meaningful and inspiring

REFERENCES

- Abdul Sakti. (2023). Improving learning through digital technology. *Jurnal Penelitian Rumpun Ilmu Teknik*, 2(2), 212–219.
<https://doi.org/10.55606/juprit.v2i2.2025>
- Ally, M. (2008). Foundations of educational theory for online learning. In T. Anderson (Ed.), *The theory and practice of online learning* (pp. 15–44). Athabasca University Press.
- Andi Kambau, R. (2024). The process of digital transformation in higher education institutions in Indonesia. *Jurnal Rekayasa Sistem Informasi dan Teknologi*, 1(3), 126–136.
<https://doi.org/10.59407/jrsit.v1i3.481>
- Bates, A. W. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning* (2nd ed.). Tony Bates Associates Ltd.
- Belva Saskia Permana, Lutvia Ainun Hazizah, & Yusuf Tri Herlambang. (2024). Educational technology: The effectiveness of using technology-based learning media in the era of digitalization. *Khatulistiwa: Jurnal Pendidikan dan Sosial Humaniora*, 4(1), 19–28.
<https://doi.org/10.55606/khatulistiwa.v4i1.2702>
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
https://doi.org/10.1207/S15327965PLI1104_01
- Deri Wanto, M. F. K. (2023). Educational technology after COVID-19. *Jurnal Tunas Pendidikan*, 5(2), 439–459.
<https://doi.org/10.52060/pgsd.v5i2.1007>
- Dwi Hatmo, S. H. (2021). The impact of the Covid-19 pandemic on the effectiveness of online distance learning. *Scholaria: Jurnal Pendidikan dan Kebudayaan*, 11(2), 115–122.
<https://ejournal.uksw.edu/scholaria/article/view/4222>
- Fricticarani, A., Hayati, A., R., R., Hoirunisa, I., & Rosdalina, G. M. (2023). Educational strategies for success in the era of technology 5.0. *Jurnal Inovasi Pendidikan dan Teknologi Informasi (JIPTI)*, 4(1), 56–68.
<https://doi.org/10.52060/pti.v4i1.1173>
- Hasanah, L., Putri, M. A., Hanin, A. H., & Siregar, W. S. (2022). The impact of technological developments on students. *Jurnal Informatika dan Teknologi Pendidikan*, 2(2), 44–48.
<https://doi.org/10.25008/jitp.v2i2.33>
- Jonassen, D. H. (1999). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: A new paradigm of instructional theory* (Vol. 2, pp. 215–239). Lawrence Erlbaum Associates.
- Pratomo, I. W. P., & Wahanisa, R. (2021). Utilization of learning management system (LMS) technology at Unnes during the Covid-19 pandemic. *Seminar Nasional Hukum Universitas Negeri Semarang*, 7(2), 547–560.
- Siti Umi Khoiriah, Lia Karunia Lam Uli Lubis, & Diva Kayla Nazwa Anas. (2023). Analysis of educational management system development in the Society 5.0 era. *JISPENDIORA: Jurnal*

Ilmu Sosial Pendidikan dan Humaniora,
2(2), 117–132.

Suryatni, L. (2021). Educational technology as the implementation of information systems in online lectures during the COVID-19 pandemic. *JSI (Jurnal Sistem Informasi) Universitas Suryadarma*, 8(1), 31–46.
<https://doi.org/10.35968/jsi.v8i1.607>

Yusra, & Sesmiarni, Z. (2025). The utilization of digital platforms to improve education quality. *Dirasah: Jurnal Studi Ilmu dan Manajemen Pendidikan Islam*, 8(1), 393–405.
<https://doi.org/10.58401/dirasah.v8i1.1624>