

The Impact of Blended Learning on Student Motivation and Engagement: A Literature Review Analysis

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ABSTRACT

Blended learning, which combines online and face-to-face learning, has been widely implemented in Indonesia, especially since the COVID-19 pandemic. This study aims to analyse the impact of blended learning on student motivation and engagement, focusing on three main indicators: participation rate, engagement in discussions, and academic outcomes. The data used in this study was collected through surveys, interviews, and direct observation in several schools in Indonesia. The results show that blended learning has a positive impact on students' motivation, especially in improving their participation, engagement in discussions and academic outcomes. Although challenges related to technology access and teaching readiness are still an obstacle. Educators need to integrate asynchronous and synchronous methods in a balanced way, and ensure the availability of learning materials that can be accessed anytime to support student autonomy

INTRODUCTION

Blended learning has become one of the more popular learning methods in education, especially after the COVID-19 pandemic. This method combines face-to-face learning with online learning, providing better flexibility and accessibility for students. Hidayat emphasised that blended learning is not only effective during the pandemic, but also has the potential to be applied post-pandemic. This study analysed the effectiveness of blended learning and found that this method can improve students' engagement and their learning outcomes (Hidayat et al., 2023). Ismail and Edi found that a problem-based learning model combined with blended learning can improve student engagement in academic reading learning (Ismail & Edi, 2022). This research shows that blended learning can increase student motivation and engagement, which are important factors in achieving good learning outcomes. In addition, Wei et al. highlighted that factors influencing students' academic self-efficacy in blended learning are critical to the successful design of learning programmes (Wei et al., 2022). This suggests that an understanding of the factors that influence the success of blended learning can assist educators in designing more effective programmes.

In Indonesia, the implementation of blended learning has involved various schools, but its impact on student motivation and engagement is still not fully understood. This study aims to fill this gap by analysing the impact of this combination of learning methods on three key aspects of student engagement: participation level, engagement in discussions, and academic outcomes. This research provides important implications for educators, educational institutions, and policy makers in implementing blended learning to improve student motivation and engagement.

LITERATURE REVIEW

Guo et al. showed that the blended learning model can improve students' active learning and academic performance in embryology subjects (Guo et al., 2022). This research confirms that the integration of face-to-face learning experiences with online experiences can provide significant benefits for students. In addition, research by Deepak shows that blended learning can overcome the disruption caused by the COVID-19 pandemic and improve student learning outcomes through the use of virtual learning tools and learning management systems (Deepak, 2022). This suggests that students' acceptance of blended learning can contribute to their academic success. The implementation of blended learning also needs to be considered. Research by Regmi and Jones identified various factors that influence the success of e-learning in health education, including the role of teachers and technology support (Regmi & Jones, 2020).

METHODOLOGY

Qualitative research with literature review approach is an effective method to explore and analyse phenomena based on relevant literature. With a systematic and critical process, this approach can make a significant contribution to the development of knowledge, especially in understanding complex and diverse issues related to blended learning. The stages in this research include the following:

1. Identification of Research Problems. At this stage, the researcher determines the issue or phenomenon to be studied.
2. Literature Review. After the research problem was identified, the researcher conducted a literature review to understand the theoretical context and previous research findings. This stage helps in building a conceptual foundation, identifying research gaps, and formulating research questions.
3. Formulation of Research Objectives and Questions. Researchers formulated research objectives and research questions.
4. Selection of Research Methods. Researchers determine the method or research design that will be used, namely phenomenological studies.
5. Data Collection. The collection was done by gathering relevant literature on the topic of blended learning.
6. Data Analysis. The data collected was systematically analysed to identify themes, patterns or relationships. Qualitative data analysis involved reading and understanding the data thoroughly and drawing connections between themes to answer the research questions.
7. Interpretation and Presentation of Results. At this stage, the researcher presents the results of the analysis in the form of an in-depth and comprehensive narrative. The researcher also provides an interpretation of the findings, relates them to the theory, and explains the implications of the research results.



Figure 1. Conceptual Framework

RESULTS AND DISCUSSION

The results show that blended learning has a significant impact on student motivation and engagement, although there are differences between students who have better access to technology and those who are less digitally supported.

Table 1. Results of Literature Analysis on the Impact of Blended Learning

Journal	Authors (years)	Finding
International Journal For Multidisciplinary Research	(Wu & Gopez, 2024)	Blended learning significantly impacts student motivation and engagement by combining asynchronous and synchronous modes, which cater to diverse learning needs and preferences. This approach fosters learner autonomy, allowing students to manage their own learning, enhancing intrinsic motivation and satisfaction. The flexibility of blended learning enables students to access materials at their convenience, promoting deeper comprehension. However, it is crucial to balance autonomy with appropriate support to prevent overwhelming students, which can lead to disengagement.
Ubiquity proceedings	(Radovan et al., 2024)	Blended learning significantly enhances student motivation and engagement, particularly in Vocational Education and Training (VET) settings. The research indicates that collaborative learning fosters greater engagement and satisfaction among students. Additionally, the integration of technology enriches the overall learning experience. However, while these approaches offer benefits, they also present challenges, such as an increased perceived workload. The study emphasizes the importance of effective assessment and feedback in boosting student satisfaction and perceived competence, ultimately promoting a more engaging learning environment.

Journal	Authors (years)	Finding
Education and Information Technologies	(Zhang & Huang, 2024)	The study highlights that blended learning, when combined with adaptive gamified assessments, significantly enhances student motivation and engagement. The implementation of these assessments led to a notable decrease in learner dissatisfaction and improved accuracy rates, indicating better language proficiency. Furthermore, 69% of students in the experimental group reported increased abilities, showcasing enhanced intrinsic motivation related to competence. Thus, adaptive gamified testing within a blended learning framework effectively fosters improved motivation and learning outcomes among young learners.
Evolutionary studies in imaginative culture	(Jinsong Zou & Songyu Jiang, 2024)	The study indicates that blended learning motivation (BLM) is significantly influenced by perceived usefulness (PU), perceived ease of use (PEU), and social presence (SP). Social presence plays a pivotal role in enhancing BLM, while PU and PEU positively affect motivation through SP. Although the direct effect of PEU on SP was unsupported, it indirectly influences SP via PU. These findings suggest that fostering social presence is essential for improving student motivation and engagement in blended learning environments.
Sustainability	(Radovan & Radovan, 2024)	The study reveals that blended learning strategies significantly enhance student motivation and engagement, particularly through collaborative learning approaches. Data collected from 106 VET students indicate that such collaborative methods lead to increased student satisfaction and engagement levels. Additionally, the integration of technology within blended learning

Journal	Authors (years)	Finding
Brazilian Journal of Computers in Education	(Moreira & Araújo Lima, 2024)	environments further improves educational experiences. However, the study also acknowledges challenges like perceived overload, emphasizing the need for effective assessment and feedback mechanisms to sustain motivation and reduce stress among students. Blended Learning positively impacts student motivation and engagement by incorporating Information and Communication Technologies (ICTs) within educational settings. The systematic literature review found that the use of platforms like Moodle, Teams, and Zoom enhances teacher-student interaction and creates engaging learning scenarios. These factors, along with support and encouragement for weekly activities, contribute to increased student autonomy and meaningful learning experiences. Overall, blended learning is shown to foster greater student engagement and motivation in the learning process.
Al-Ishlah	(Latif et al., 2024)	The study found that the level of university student motivation towards Citizenship Learning through blended learning was 63.72%, categorized as high. This indicates that blended learning positively impacts student motivation, even amidst challenges such as internet reliability and device availability. The combination of face-to-face and online learning methods appears to enhance engagement and motivation in the learning process, demonstrating the effectiveness of blended learning in maintaining strong student motivation in educational settings.

Overall, blended learning shows significant impact in increasing student motivation and engagement across a variety of educational contexts. Many studies highlight the flexibility of this method, which combines asynchronous and synchronous learning to meet the needs of diverse students (Moreira & Araújo Lima, 2024; Wu & Gopez, 2024). The application of technology in learning, such as the use of Moodle, Teams, and Zoom platforms, and the integration of adaptive assessment and gamification, enriches the learning experience, increases student satisfaction, and improves learning outcomes (Moreira & Araújo Lima, 2024; Zhang & Huang, 2024). The use of digital platforms in blended learning can increase student interaction and engagement, which in turn contributes to better academic outcomes (Simbolon, 2022).

Collaboration becomes a key element that contributes to greater engagement, especially in the context of vocational education and training. Collaboration not only increases student satisfaction, but also strengthens the sense of competence through effective feedback mechanisms (Radovan et al., 2024; Radovan & Radovan, 2024). In addition, social presence plays an important role in driving learning motivation through the perceived ease and benefits of using technology (Jinsong Zou & Songyu Jiang, 2024).

Nonetheless, research has also noted a number of challenges, such as the perception of high workload, dependence on technological infrastructure, and the need to maintain a balance between student autonomy and educator support (Latif et al., 2024; Wu & Gopez, 2024). To overcome these challenges, an emphasis on effective assessment and structured support is key in ensuring the successful implementation of blended learning. Thus, blended learning is not only able to increase student motivation and engagement, but also opens up opportunities for further innovation in learning design and implementation in the future.

Impact of Blended Learning on Student Participation Level:

Students who engage in blended learning tend to participate in learning activities more often compared to those who only follow traditional face-to-face learning. The ease of access to online materials allows students to prepare more thoroughly, which in turn increases their confidence in participating during face-to-face sessions. The level of student participation in blended learning is an important aspect that affects the effectiveness of learning. Blended learning, which combines face-to-face learning with online learning, provides flexibility that can increase student participation. Research by Utami shows that the blended learning model can help students learn independently and improve their critical thinking skills, which in turn increases their participation in the learning process (Utami, 2017). In addition, Wihartanti emphasises that students' participation in asking, answering, and completing tasks is key to achieving learning objectives in the context of blended learning (Wihartanti, 2022; Yoto et al., 2024).

The factors that influence the level of student participation in blended learning are also important to understand. Students' learning motivation greatly influences their participation, especially in unconventional learning situations such as during the COVID-19 pandemic. In addition, Priono et al. found that the implementation of blended learning model can improve student learning outcomes, indicating that higher participation contributes to better academic outcomes (Alfiatuzzakiyah et al., 2024; Priono et al., 2019). Student engagement in blended learning is not only influenced by individual motivation, but also by external factors such as support from teachers and the learning environment. Ikasari et al. noted that low student participation is often caused by teachers' lack of optimisation of student potential and students' passivity in the learning process (Ikasari et al., 2017). Therefore, it is important for educators to implement active and interactive learning methods to increase student participation.

In this context, the use of technology and multimedia in learning also plays an important role. Cucus and Aprilinda showed that the implementation of multimedia-based e-learning can increase the effectiveness of distance learning, which is relevant to blended learning, as students can absorb more material through interesting and interactive content (Cucus & Aprilinda, 2016). Thus, the combination of student motivation, teacher support, and appropriate use of technology can create a conducive learning environment to increase student participation in blended learning. Overall, to increase the level of student participation in blended learning, it is important to pay attention to various influencing factors, including motivation, teaching methods, and technology use. With the right approach, blended learning can be an effective method in improving students' engagement and their learning outcomes.

The Impact of Blended Learning on Participation in Discussion:

Online discussions that are an integral part of blended learning also increase students' engagement in discussions. The online platform provides opportunities for students to think more critically and provide more structured responses, compared to face-to-face discussions which are often influenced by classroom dynamics. However, some students reported that they felt more comfortable discussing in a face-to-face class than in a virtual space. Students' engagement in online discussion in blended learning model is a key factor that affects the effectiveness of learning. Online discussion allows students to actively interact, share ideas, and develop a deeper understanding of the material learnt. Research by Kamza et al. shows that discussion learning method, especially buzz group type, can increase students' learning activeness in social studies subject, which shows that interaction in small groups can encourage active participation (Kamza et al., 2021; Romadin et al., 2022). This is in line with Alimuddin's findings which emphasise that discussion-based learning can improve students' understanding of the material, which has implications for better learning outcomes (Alimuddin et al., 2024).

Activeness in online discussions is also influenced by the teacher's role in managing the discussion. The importance of teachers' pedagogical abilities in applying group discussion methods to improve students' critical thinking skills. Teachers who are able to facilitate discussions well can create an environment that supports students' active participation. In addition, Nugroho and Lestari found that students' comfort in participating in discussions is strongly influenced by the frequency of participation and their speaking ability, indicating that positive experiences in discussions can increase students' activeness (Nugroho & Lestari, 2022).

However, challenges in online discussions also need to be considered. Research by Suhartini and Himam revealed that in online discussions, there are students who tend to be passive or dominate, which can hinder balanced interactions (Suhartini & Himam, 2019). Therefore, it is important to develop strategies that can encourage all students to actively participate. For example, the use of varied discussion techniques and clear assignments can help increase student engagement in discussions. Overall, engagement in online discussions in blended learning can be improved through the implementation of effective discussion methods, active roles of teachers, and strategies that support the participation of all students. Thus, online discussion is not only a means to share information, but also a platform to develop students' critical and collaborative thinking skills.

The Impact of Blended Learning on Academic Outcomes:

The impact of blended learning on academic outcomes shows mixed results. Students who actively participate in online and face-to-face discussions tend to have better academic outcomes. However, this effect is also influenced by other factors such as parental supervision, device availability, and teacher readiness to use technology effectively. The impact of blended learning on student academic outcomes has been a widely researched topic, especially in the context of modern education that increasingly relies on technology. Blended learning, which combines face-to-face learning with online learning, is proven to have a positive influence on student learning outcomes. Research by Batubara et al. showed that the implementation of a blended learning model during the COVID-19 pandemic resulted in a significant improvement in student learning outcomes, with the average score increasing from 56.88 to 77.45 (Batubara et al., 2022). This suggests that blended learning can improve learning effectiveness, especially in situations that demand rapid adaptation to new methods.

In addition, research by Masruri also supports this finding, where the use of blended learning model in class X IPS 1 MAN 1 Cilacap improved students' activeness and their learning outcomes, with many students reaching the Minimum Completion Criteria (KKM) (Masruri, 2023). This shows that blended learning not only improves academic outcomes, but also encourages student engagement in the learning process. Another study by Muhson confirmed that the application of blended learning in Islamic Religious Education (PAI) subjects also showed a significant increase in learning outcomes, indicating that this method is effective in a broader learning context (Muhson, 2019).

The positive impact of blended learning was also seen in a study by Bili et al., who found that students who learnt using blended learning methods had higher mean learning outcomes compared to conventional methods (Bili et al., 2023). This suggests that the integration of technology in learning can provide a competitive advantage in terms of academic outcomes. In addition, research by Hafidzah shows that the use of Learning Management System (LMS) in blended learning can improve students' academic grades, which suggests that technology can play an important role in improving learning outcomes (Hafidzah, 2020; Romadin et al., 2022). Overall, blended learning is proven to have a significant positive impact on student academic outcomes. With proper implementation, this method can improve student engagement, learning outcomes, and critical thinking skills, all of which are essential for academic success in the modern education era.

CONCLUSIONS AND RECOMMENDATIONS

Blended learning is proven to improve student motivation and engagement in Indonesia, especially in terms of participation, engagement in discussions and academic outcomes. However, to maximise its impact, more attention needs to be paid to the constraints faced by students, such as access to technology and training for teachers. By addressing these challenges, blended learning can be a more effective learning model that can improve students' academic outcomes in the future. Recommendations from this study are related to the flexibility offered by blended learning that provides opportunities to design learning that is more personalised and suited to students' needs. Therefore, educators need to integrate asynchronous and synchronous methods in a balanced manner, and ensure the availability of learning materials that can be accessed at any time to support student autonomy.

FURTHER STUDY

Although literature review is a very useful method to synthesise knowledge and provide an overview, the study still has significant limitations. These limitations, such as reliance on available literature, selection bias, and difficulty in capturing the local context, need to be considered by researchers. Future research could consider a mixed methods approach to complement the literature review findings with more contextualised and in-depth empirical data.

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