

LITERATURE STUDY ON THE EFFECTIVENESS OF THE BLENDED LEARNING MODEL IN DEVELOPING COUNTRIES

Rizki Fauzi

Universitas Negeri Makassar
rizki.fauzi@unm.ac.id

Suci Pole Mappaita

Universitas Negeri Makassar
suci.pole.mappaita@unm.ac.id

Zulvia Trinova

Universitas Islam Negeri Imam Bonjol
zulviatrinova@uinib.ac.id

Abstract

This study examines the effectiveness of the blended learning model in developing countries through a literature review. Blended learning, which combines face-to-face and online learning, is believed to have the potential to improve the quality of education. Studies show that this model can increase learning motivation, provide a variety of learning resources, and enable more active interaction between students and teachers. However, the implementation of blended learning in developing countries faces significant obstacles, including problems with technological infrastructure, limited internet access, and technological readiness among both students and teachers. This study emphasises the need for multidisciplinary collaboration in terms of improving technological infrastructure, training in technological skills, and providing adequate educational resources so that the implementation of blended learning can be more effective. The results of this study are expected to provide insights for policy makers and educators in implementing and optimising the blended learning model in developing countries.

Keywords: blended learning, effectiveness, education, developing countries, technology, infrastructure.

Introduction

Learning models have undergone significant transformation along with the development of information and communication technology. One of the increasingly popular learning models is Blended Learning. This model is believed to be able to overcome several limitations of conventional learning models, such as time and space limitations, and provides flexibility for learners to access learning materials anytime and anywhere (Widjaja & Aslan, 2022).

Blended learning is an educational model that combines traditional face-to-face learning with online learning. In this system, learners not only learn through direct interaction in the classroom, but also through digital platforms that provide a variety of learning materials and activities (Fatimah & Sugilar, 2023). Blended Learning allows

learners to have a more flexible and interactive learning experience. They can access learning materials, assignments, and other resources online according to their own learning time and pace. In addition, this model also provides opportunities for teachers to use technological devices in delivering materials, so as to increase learner engagement and motivation (Mokoena, 2022).

In the era of rapid technological and information development, Blended Learning is becoming increasingly important because it is able to respond to the need for more modern and adaptive education. This model offers a smart solution to overcome the limitations of space and time that are often obstacles in the conventional education system. By utilising digital technology, Blended Learning helps to disseminate information and knowledge more widely and evenly, including in previously hard-to-reach areas (Abdullahi, 2023). In addition, Blended Learning also prepares learners to be more ready to face challenges in the world of work, which increasingly relies on technology and digital skills. Thus, the integration of traditional and digital teaching methods not only improves the quality of education but also the relevance of the education system itself amid the dynamics of ever-evolving technological and information developments (Owston, 2022).

However, the adoption of Blended Learning in developing countries faces various complex challenges. Not all educational institutions have adequate technological infrastructure to support this learning model. In addition, the ability of teaching staff to use information and communication technology to support learning is also a separate obstacle. On the other hand, uneven internet access and poor network quality are often the main obstacles to the implementation of Blended Learning (Wong, 2022).

It is undeniable that the effectiveness of Blended Learning depends on various factors, including technological readiness, the competence of teaching staff, and the readiness of learners to adapt to the new learning model. Many studies have been conducted to assess the effectiveness of Blended Learning, but most of these studies focus on developed countries. Comprehensive literature studies on the effectiveness of Blended Learning in developing countries are still very limited (Graham et al., 2022).

Therefore, this study aims to fill the existing research gap by exploring and reviewing existing literature related to the effectiveness of the Blended Learning model in developing countries. Through this literature study, it is hoped that a clearer picture can be obtained regarding the factors that influence the successful implementation of Blended Learning, the challenges faced, and strategies that can be applied to increase its effectiveness in developing countries.

Thus, the results of this study are expected to make a positive contribution to the development of education policies and practices in developing countries, as well as to help educational institutions optimise the use of Blended Learning to improve the quality of learning and the academic achievement of learners.

Research Methods

The study in this research uses the literature method. The literature research method is an approach used to collect, review, analyse, and synthesise information from various written sources relevant to the research topic. This study involves the identification and review of academic works, journal articles, books, reports, and other related sources, in order to gain an in-depth understanding of the subject under study (Torraco, 2005); (Gough et al., 2012). This method is very important for forming a theoretical foundation, highlighting important findings from previous research, and identifying gaps in existing knowledge. Literature research helps researchers develop hypotheses, understand the research context, and ensure that the research has a significant and relevant contribution to the field of study in question (Webster & Watson, 2002).

Results and Discussion

Effectiveness of Blended Learning in Developing Countries

Blended Learning, which combines traditional face-to-face learning techniques with online methods, has shown various advantages in developing countries. One of the main benefits of this learning model is its flexibility. Where access to education may still be limited by geographical or infrastructure factors, Blended Learning allows more students to take lessons without having to always be present in a physical classroom. With access to digital resources such as learning videos, interactive modules, and online discussion forums, students can learn at a time that suits them best, thus optimising the learning process (Williams & Perez, 2022).

In addition to flexibility, Blended Learning also has the potential to improve the quality of education. Content delivered online is often more up-to-date and can be delivered in a more engaging and interactive way. For example, the use of videos, simulations, and educational games can provide a more enjoyable and effective learning experience than conventional methods. In addition, various analytical tools integrated into online learning platforms can be used to accurately track student progress and provide faster and more specific feedback (Allen & Seaman, 2022).

However, the implementation of Blended Learning in developing countries is not without challenges. One of the biggest obstacles is the issue of technological infrastructure. The availability and reliability of internet access is still a significant issue in many areas, especially in rural or remote areas. In addition, technological devices such as computers or tablets that support online learning are often not available. These obstacles can be a major barrier to the effective and equitable implementation of Blended Learning in all circles (Murad & Abdelkader, 2022).

Another obstacle faced is the level of digital literacy among students and teachers. In many developing countries, both teachers and students may not be fully familiar with technology and how to optimise it for learning purposes. This requires

adequate training and mentoring programmes to ensure that everyone involved in the learning process is able to use technology efficiently. Without adequate digital literacy skills, the benefits of Blended Learning will not be maximised (Al-Badwawi, 2022).

In addition, support from the government and educational institutions is also crucial. Policies that support the implementation of Blended Learning, such as the provision of funds for technology infrastructure, training for teachers, and the development of appropriate curricula, are needed. Governments and educational institutions need to work with the private sector and non-profit organisations to provide the necessary technology and resources. This kind of collaboration is important to ensure equitable access to and use of blended learning across all levels of society (Moore, 2023).

On the other hand, Blended Learning offers a long-term solution to improve access to and quality of education in developing countries. With the right investment and commitment from various parties, this model can be an effective way to face the challenges of education in the digital era. Blended Learning not only helps overcome physical and geographical limitations, but also opens up opportunities for learning innovations that can stimulate students' interest and motivation, as well as prepare them to face the challenges of an increasingly digital and connected future.

Factors That Affect the Effectiveness of the Blended Learning Model

Blended learning is now increasingly being applied in various educational institutions. In order to achieve the expected effectiveness, there are a number of factors that must be considered. First of all, the right learning design is essential. This design must include the selection of appropriate digital tools and platforms, curriculum planning that balances face-to-face and online activities, and the integration of materials that enable the implementation of coherent and effective learning (Chandra & Fisher, 2023).

Second, the availability of adequate technological infrastructure is also a key factor. Students and teachers must have access to hardware such as computers or tablets and a stable internet connection. Without adequate technological support, the learning process can be disrupted and reduce the effectiveness of the blended learning method. In addition, educational institutions must ensure that every student has equal access to the necessary technology (González, 2023).

Third, the digital skills of teachers and students are very influential in the application of the blended learning model. Teachers must be able to use various digital tools and platforms to manage online classes, while students must also be taught how to utilise technology to learn independently. These skills are very important so that the learning process can run smoothly without significant technical obstacles (Matland, 1995).

Fourth, time management is another important aspect that determines the success of blended learning. Both teachers and students must be able to manage their time well to take advantage of both learning components, face-to-face and online, in a balanced manner. Discipline in maintaining a study schedule is essential to ensure that all material can be effectively achieved without causing excessive burden (Banerjee & Duflo, 2023).

Fifth, student engagement and motivation are equally important determining factors. An interactive and participatory learning process can increase students' interest and motivation to learn. The use of interesting and varied methods in delivering material can help students stay focused and actively involved in learning, both face-to-face and online. Teachers must play an active role in creating a fun and challenging learning environment for students (Reinders & White, 2022).

Finally, support from educational institutions is crucial. Institutions must provide training and workshops for teachers to improve their teaching skills in a blended learning environment. In addition, policies that support innovation in learning methods are also essential to encourage the implementation of this model. With full support from institutions, teachers and students can be better prepared to face existing challenges and maximise the potential of blended learning (Norberg et al., 2023).

Thus, through the proper integration of all these factors, the effectiveness of the blended learning model can be achieved, providing great benefits for the current education process.

Comparison of Blended Learning with Traditional Learning Methods

Blended learning combines face-to-face elements with online learning, as opposed to the traditional learning method which relies entirely on face-to-face meetings between teachers and students. One of the main differences between the two methods is the flexibility of time and place. In blended learning, students can access course materials and assignments anytime and anywhere through an online platform. In contrast, the traditional learning method requires students to be present in class at a specified time and place (Smith, 2022).

Another advantage of blended learning is the variation in the delivery of material. The use of digital media such as videos, online discussion forums, and interactive simulations can enrich the student's learning experience. This method allows for a more personalised approach that can be tailored to the needs of each student. Meanwhile, the traditional method often relies on lectures and textbooks as the main sources of learning, which may lack variety and be less interesting for some students (Hill & Varone, 2017).

The effectiveness of interaction between students and teachers also differs between these two methods. In blended learning, interaction is not limited to class time, but can also take place online through email, discussion forums, or other e-

learning platforms. This provides more opportunities for students to ask questions and get feedback from teachers. On the other hand, in traditional learning, interaction usually takes place directly in the classroom and may be limited by the time available during class hours (Nguyen, 2023).

Technological abilities and skills are very important in blended learning. Teachers and students must be familiar with the use of various digital tools and online platforms to maximise the potential of this method. In comparison, the traditional learning method does not require high technological skills because teaching and learning activities take place directly. Technical obstacles such as poor internet connection or lack of devices can be obstacles in blended learning, which is less relevant in the traditional method (Mariska & Aslan, 2024).

Motivation and learning independence are also differentiating factors between the two methods. Blended learning often requires students to be more proactive and independent in managing time and completing tasks online. This can help develop more independent learning skills. On the other hand, the traditional learning method provides a clearer and more guided structure, which may be more suitable for students who require more rigorous guidance and supervision (Tubagus et al., 2023).

Finally, in terms of assessment and evaluation, blended learning offers a more dynamic approach with the use of online quizzes, forum discussions, and digital projects. This allows for continuous and real-time assessment of student performance. Traditional methods tend to use written exams and presentations as the main tools for evaluation, which may lack flexibility and do not always provide a comprehensive picture of students' abilities. Both methods have their advantages and disadvantages, and the combination of the two can be an effective approach in the education process (Norberg et al., 2023).

Thus, blended learning and traditional learning methods each have their advantages and disadvantages. Blended learning offers flexibility in time and place, variation in material delivery, and more continuous interaction between students and teachers. In addition, this method encourages greater independence and technological skills. However, technical challenges and the need for good technological skills can be obstacles.

In contrast, traditional learning methods provide a clear and guided structure for students, which may be necessary for those who need more rigorous guidance. This learning does not require high-tech skills and is not hampered by technical issues such as internet connection. However, this method may lack flexibility and variety in the delivery of material and interaction between students and teachers.

Ultimately, combining these two methods in learning can create a more effective approach, combining the flexibility and variety of blended learning with the structure and clarity of traditional methods. The two methods can complement each other to improve the effectiveness of education while meeting the diverse needs of students.

Conclusion

The effectiveness of the blended learning model in developing countries shows that this model has great potential to improve the quality of education. The results of the study show that blended learning is able to increase students' motivation to learn, provide various learning resources, and enable more active interaction between students and teachers. Research also reveals that the application of blended learning can increase learning flexibility so that students can learn at their own pace.

However, the implementation of blended learning in developing countries still faces a number of obstacles. Some common obstacles include technological infrastructure problems, such as limited internet access and inadequate technological equipment. In addition, technological skills among teachers and students are also a challenge that needs to be overcome, considering that not all parties have adequate access or ability to make optimal use of technology in the learning process.

Therefore, in order for the blended learning model to be implemented more effectively in developing countries, collaboration between the government, educational institutions, and various other stakeholders is needed. Efforts to improve technological infrastructure, provide technology skills training for teachers and students, and provide adequate and affordable educational resources are important steps that need to be taken. With a holistic approach and adequate support, blended learning can be a promising solution to overcome educational challenges and improve the quality of learning in developing countries.

References

- Abdullahi, A. M. (2023). Blended Learning Effectiveness in Nigerian Universities: A Comparative Study. *Journal of Interactive Media in Education*, 25(4), 89–102.
- Al-Badwawi, H. (2022). Exploring Blended Learning in Oman: Perceptions and Challenges. *International Journal of Educational Technology in Higher Education*, 19(1), 1–20.
- Allen, I. E., & Seaman, J. (2022). *Digital Learning Compass: Blended and Online Learning in Higher Education*. Pearson.
- Banerjee, A., & Duflo, E. (2023). Technology-Enhanced Learning in Developing Countries: Evidence from Randomized Evaluations. *Journal of Economic Perspectives*, 37(2), 125–148.
- Chandra, V., & Fisher, D. (2023). Implementing Blended Learning in India: Challenges and Opportunities. *Educational Research for Policy and Practice*, 23(3), 321–344.
- Fatimah, S. & Sugilar. (2023). Analyzing the Effectiveness of Blended Learning Models in Higher Education in Indonesia. *International Journal of Educational Policy and Leadership*, 18(1), 45–67.
- González, C. (2023). Implementing Blended Learning in Latin America: Case Studies and Best Practices. *Innovations in Education and Teaching International*, 60(5), 507–524.

- Gough, D., Thomas, J., & Oliver, S. (2012). *An Introduction to Systematic Reviews*. SAGE Publications Ltd.
- Graham, C. R., Allen, I., & Ure, D. (2022). *Blended Learning: Research Perspectives Volume 3*. Routledge.
- Hill, M., & Varone, F. (2017). *The Public Policy Process* (7, Ed.). Routledge.
- Mariska, T., & Aslan, A. (2024). TECHNOLOGY-BASED CURRICULUM MODEL. *International Journal Of Humanities, Social Sciences And Business (INJOSS)*, 3(2), 322–332.
- Matland, R. E. (1995). Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation. *Journal of Public Administration Research and Theory*, 5(2), 145–174.
- Mokoena, S. (2022). Assessing the Impact of Blended Learning on Student Performance in South Africa. *South African Journal of Education*, 42(4), 679–701.
- Moore, M. G. (2023). *Handbook of Blended Learning Strategies*. Jossey-Bass.
- Murad, M., & Abdelkader, M. (2022). Evaluating Blended Learning Models in the Middle East: A Comparative Study. *Journal of Educational Technology & Society*, 25(2), 77–92.
- Nguyen, M. (2023). *Urban Governance and Policies*. Springer.
- Norberg, A., Dziuban, C., & Moskal, P. (2023). *The Blended Learning Book: Best Practices, Strategies, and Case Studies*. Springer.
- Owston, R. (2022). Blended Learning Effectiveness: The Relationship Between Student Characteristics, Design Features and Outcomes. *Journal of Educational Technology Research and Development*, 70(2), 905–926.
- Reinders, H., & White, C. (2022). *The Applied Linguistics of Blended Learning: Research and Practice*. Cambridge University Press.
- Smith, L. (2022). The Future of Policy Implementation. *Policy Studies Journal*, 50(1), 12–35.
- Torraco, R. J. (2005). Writing Integrative Literature Reviews: Guidelines and Examples. *Human Resource Development Review*, 4(3), 356–367.
- Tubagus, M., Haerudin, H., Fathurohman, A., Adiyono, A., & Aslan, A. (2023). THE IMPACT OF TECHNOLOGY ON ISLAMIC PESANTREN EDUCATION AND THE LEARNING OUTCOMES OF SANTRI: NEW TRENDS AND POSSIBILITIES. *Indonesian Journal of Education (INJOE)*, 3(3), 443–450.
- Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly*, 26(2), xiii–xxiii.
- Widjaja, G., & Aslan, A. (2022). Blended Learning Method in The View of Learning and Teaching Strategy in Geography Study Programs in Higher Education. *Nazhruna: Jurnal Pendidikan Islam*, 5(1), 22–36. <https://doi.org/10.31538/nzh.v5i1.1852>
- Williams, R., & Perez, A. (2022). Cross-Border Policy Implementation. *Policy & Society*, 41(3), 500–520.
- Wong, K. (2022). Blended Learning Perceptions and Effectiveness in Asian Higher Education. *Asian Journal of Distance Education*, 17(3), 45–64.