

Post-Pandemic Preparedness For Blended Learning Among University Of Mataram Students

Darmiany^{1*}, I Nyoman Karma², Muhammad Erfan³

^{1,2,3} Program Studi Pendidikan Guru Sekolah Dasar, FKIP Universitas Mataram, Indonesia

*Corresponding Author:

Email: darmiany@unram.ac.id

Abstract.

In implementing college courses that utilize blended learning, various challenges have emerged. Internet connectivity is identified as a key issue in online learning, according to research findings. Another study highlights evaluation of learning as a significant challenge for educators in higher education. Preliminary investigations show an increase in student cheating, particularly plagiarism, during online courses. This research aims to assess the readiness of FKIP University of Mataram students for blended learning courses. It is a quantitative study using a descriptive approach, where a learning readiness survey instrument with a scoring system is employed. Data are qualitatively analyzed across five key dimensions. The results indicate that students confidently use various platforms like Ms. Office and online course applications, have strong self-directed learning abilities, good learner control, are self-motivated, and can communicate effectively online. Based on these findings, the study concludes that students at the University of Mataram are well-prepared for blended learning.

keywords: Blended learning, student and online learning.

I. INTRODUCTION

The COVID-19 pandemic, which has plagued Indonesia for the past two years, has directly impacted the country's education system. Since its emergence, the system shifted from conventional face-to-face education to distance learning (Haque, 2019; Radha et al., 2020; Şeren & Özcan, 2021). This paradigm shift affected aspects such as teaching techniques, educational materials, and the psychological conditions of teachers and students (Wijaya & Bukhori, 2017); (Sanmee et al., 2021). This impact extended beyond primary and secondary education to higher education (Higgins, 2020). Online courses, which had been occurring even before the pandemic, were already in use in Indonesia, specifically by the Universitas Terbuka (UT) (Husain, 2019; Masrurroh, 2020). However, online courses also presented several problems, especially for other universities that had not previously implemented online learning (Maulyda et al., 2020). The introduction of COVID-19 vaccines and regulations to minimize the spread of the virus led to a decline in the number of COVID-19 cases, influencing the education system's evolution.

In 2021, the blended-learning paradigm gained popularity (Ismaniati et al., 2016; Risnani & Husin, 2019; Noervadila et al., 2021). Blended-learning allows lecturers to conduct both face-to-face and online classes simultaneously (Benali & Ally, 2020), technically dividing classroom capacity 50% for in-person and 50% for online sessions through platforms like Zoom Meeting and Google Meet (Oktasari et al., 2018; Moya & Camacho, 2021; Noervadila et al., 2021). However, implementing this blended-learning paradigm posed several problems (Kumar & Chand, 2019). Research indicated that internet connectivity was a key issue in online learning (Grant, 2019; Cahyana et al., 2020). Other studies (Ozdamli & Cavus, 2011; Hedberg et al., 2018; Kumar & Goundar, 2019) pointed out evaluation of learning as a significant challenge for educators in higher education. Preliminary research also showed an increase in student cheating, such as plagiarism, during online courses. Based on preliminary studies and previous research, identifying issues in student readiness for Blended Learning Courses (KBL) is crucial. It is important to ensure students are prepared for the blended-learning paradigm in the following years, necessitating a valid identification of potential issues that might hinder student readiness for online or blended courses.

II. METHODS

This study is a qualitative research using a descriptive approach. The primary data source is students from the Faculty of Education at the University of Mataram. The instrument used in this study is a questionnaire that measures the readiness level of students for Blended Learning Courses (KBL) at the University of Mataram. The readiness index for Blended Learning Courses (KBL) examined is based on five dimensions: computer/internet self-efficacy, self-directed learning, learner control, motivation for learning, and online communication self-efficacy. Data is qualitatively analyzed, starting from data collection, data reduction, data presentation, and concluding with the drawing of conclusions.

III. FINDING AND DISCUSSION

Computer/Internet self-efficacy capability

The Computer/Internet self-efficacy capability consists of three indicators: students' confidence in using basic functions of Ms. Office programs, which include Ms. Word, Ms. Excel, Ms. PowerPoint, etc. Based on the responses from the students, the general results obtained are as follows: Based on the finding, the majority of students are confident in their ability to use the basic functions of the Ms. Office suite. Notably, 15 percent of the students are very confident in their use of Ms. Office, indicating a strong proficiency in these tools, which are essential for blended learning in academic settings. The second question pertains to the students' knowledge and skills in using software for online classes, such as Google Meet and Zoom Meeting. The results of the questionnaire regarding this is stated that that most students are uncertain about their ability to use software for online learning. However, the data in suggests that a significant portion of students are competent in using online learning platforms such as Google Meet and Zoom Meeting. Specifically, 31% of students consider themselves proficient, and an additional 13.8% believe they are very proficient in using these software tools for online classes. The third question focuses on the students' confidence in using the internet (Google, etc.) to search and gather information for online learning. It is stated that the majority of students are highly confident in using the internet, with 48% of students responding that they are very confident. Only 10.3% of students express uncertainty in using internet-connected devices for searching or gathering information in online learning.

Self-Directed Learning

The Self-Directed Learning dimension comprises five main indicators: creating individual learning plans, handling learning difficulties independently, managing time, designing learning objectives, and individual expectations of each student. The fourth question, included in the self-directed learning dimension, asks whether students independently formulate their learning plans. Based on the data, it appears that most students are uncertain about whether they are accustomed to independently developing their learning plans without waiting for assignments and other prompts. However, the data also indicates that a larger number of students feel they are used to organizing their learning plans on their own. The fifth question, still within the self-regulated learning dimension, asks whether students seek help when facing learning difficulties. Based on the data, the majority of students strongly agree on seeking help when they encounter learning difficulties. Unstructured interviews with students also revealed that they organize group study sessions, inviting knowledgeable peers to help overcome challenges faced in online learning. The sixth question asked how students manage their time, especially given the numerous tasks associated with college coursework. It is crucial for students to be adept at time management. Students' responses regarding their time management skills in the self-regulated learning dimension. Based on the data, it is found that most students are able to manage their time effectively.

However, 44% of students still express uncertainty about their ability to efficiently manage time. The seventh question, also within the dimension of self-directed learning, inquiries about students' ability to design learning objectives they aim to achieve. Based on the data, most students agree with the statement that they plan learning objectives for each course they wish to master. Unstructured interviews with students revealed that they base their learning objectives on the semester learning plan (RPS). The RPS serves as a guideline for each meeting, outlining what to learn and the competencies each student needs to master. The eighth question pertains to students' hopes and expectations for each learning activity. From data result, it is

observed that 44% of students have high expectations in achieving goals and competencies in each learning activity. High expectations for learning outcomes indirectly influence the motivation and self-regulated learning efforts of individual students.

Learner Control

The Learner Control dimension consists of three main indicators: self-guided direction in learning activities, handling distractions during learning, and retention through repetition of material independently by students. The ninth question asks whether students can direct their learning progress independently. The finding stated that most students are capable of directing their learning progress. This ability is partly due to the role of educators who continuously monitor and support students during lectures. Educators also use multiple platforms to track students' learning progress through their assignments. The tenth question addresses distractions or disturbances students experience due to other activities while learning online, such as receiving text messages while browsing the internet. It is found that while some students are distracted by such disruptions, others are not. Unstructured interviews with respondents revealed that students are often distracted by messages from WhatsApp groups and other unrelated notifications during learning activities. The eleventh question pertains to the repetition of material and its relation to students' retention in learning activities. Based on the finding, 60% of students are uncertain about how often they repeat the material learned on the same day. They tend to focus more on preparing for upcoming classes or the next subject. This indicates a need for educators to anticipate such issues by doing recapitulation and briefly revisiting what was learned in the previous week.

Motivation for Learning

The motivation for learning dimension includes four main indicators: openness to new ideas, learning motivation, personal development from mistakes, and brainstorming by sharing ideas with others. The twelfth question concerns students' responses to new ideas, not only those arising in class but also outside the classroom. The finding stated that most students agree that they are open to new ideas, with 45% agreeing and 42.5% strongly agreeing. This acceptance of new ideas may indicate that students possess a positive growth mindset. The thirteenth question focuses on the students' motivation to learn, which acts as a driver for their self-regulated learning. The finding stated that most students strongly agree that they have good learning motivation. This motivation among students can serve as an indicator that with some guidance on self-regulated learning, students can become independent learners. The fourteenth question is about the students' ability to improve themselves from past mistakes. Learning from mistakes is essentially a trial-and-error-based learning process. It is found that 14, 49.2% of students agree that one way to improve themselves is to learn from past mistakes. This approach of learning from errors can guide future educators to become reflective practitioners, aligning with the goals of the independent curriculum. The fifteenth and final question in the motivation for learning dimension is about brainstorming or sharing ideas with others. The finding stated that the majority of students strongly agree and are enthusiastic about sharing ideas with others. This willingness to share ideas can lead to the development of extraordinary or innovative concepts.

Online Communication Self-Efficacy

The Online Communication Self-Efficacy dimension comprises three main indicators: students' confidence in using online features for communication, confidence in expressing themselves through writing, and confidence in posing questions during online discussions. The sixteenth question relates to students' confidence level in using online features like email, instant messaging, etc., for effective communication with others. It is stated that there is a balance between students who are very confident in using online features and those who are still uncertain about their confidence in using these features. The seventeenth question is about whether students feel confident in expressing themselves. In this context, self-expression refers to the ability to convey humor and emotions through writing. It can be said that most students are confident in expressing their emotions and humor through writing. This ability to express oneself can be an indicator of self-regulated learning. The final question, number eighteen, addresses students' confidence in posing questions during online discussions. The data stated that a majority (48.3%) of students feel confident when asking questions online. However, some students experience apprehension about asking trivial questions or queries that might have been already answered or asked by others. This confidence in posing

questions online indicates that students have the willingness to be self-regulated learners, capable of managing themselves as independent learners.

IV. CONCLUSION AND SUGGESTION

Based on the research findings and discussion, students are confident and capable of using various platforms such as Ms. Office, online course applications, and the internet. They demonstrate good self-directed learning and learner control, are able to self-motivate, and have strong online communication skills. Considering these achievements across the mentioned dimensions, it is concluded that students at Universitas Mataram are very well-prepared for blended or mixed-mode learning. It is recommended to enhance students' proficiency in online learning platforms through targeted training. Encourage the creation of individual learning plans and provide support for effective time management. Emphasize the importance of setting clear learning objectives aligned with semester plans. Address distractions during online learning and promote regular recapitulation of material for improved retention. Foster a growth mindset by encouraging openness to new ideas and learning from mistakes. Support effective online communication skills, including expressing oneself through writing and posing questions during discussions. Ensure continuous monitoring and support from educators while promoting collaborative learning among students. Implementing these strategies can contribute to a more confident, self-directed, and motivated student body in the online learning environment.

REFERENCES

- [1] Benali, M., & Ally, M. (2020). Towards a Conceptual Framework Highlighting Mobile Learning Challenges. *International Journal of Mobile and Blended Learning*, 12(1), 51–63.
- [2] Biton, Y., & Segal, R. (2021). Learning and Teaching Mathematics with Online Social Networks: The Case of Facebook. In *Teacher Education [Working Title]*. IntechOpen. <https://doi.org/10.5772/intechopen.95998>
- [3] Caetano, G. A., & Zaro, M. (2018). The Impact of Using the Interactive Multimedia Book on Mathematics Learning: A Focus on 7th Grade Students Performance. *Creative Education*, 09(15), 2455–2476.
- [4] Cahyana, U., Septian, I., & Erdawati, E. (2020). The Effect Of Mobile Learning And Learning Styles On Students' Scientific Literacy In Salt Hydrolysis Concept. *JTK (Jurnal Tadris Kimiya)*, 5(2), 252–260.
- [5] Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.)*. SAGE.
- [6] Docherty-Skippen, S. M., Karrow, D., & Ahmed, G. (2020). Doing Science: Pre-Service Teachers' Attitudes and Confidence Teaching Elementary Science and Technology. *Brock Education: A Journal of Educational Research and Practice*, 29(1), 25–35.
- [7] Erol, K., & Danyal, T. (2020). Analysis of distance education activities conducted during COVID-19 pandemic. *Educational Research and Reviews*, 15(9), 536–543. <https://doi.org/10.5897/ERR2020.4033>
- [8] Eynon, R., & Malmberg, L. (2021). Lifelong learning and the Internet: Who benefits most from learning online? *British Journal of Educational Technology*, 52(2), 569–583. <https://doi.org/10.1111/bjet.13041>
- [9] Fuadah, D. Z., Hapsara, S., & Sedyowinarso, M. (2016). The Readiness of Students to Learn Interprofessional Teamwork in Antenatal Care. *Jurnal NERS*, 9(2), 226. <https://doi.org/10.20473/jn.V9I22014.226-235>
- [10] Grant, M. M. (2019). Difficulties in defining mobile learning: analysis, design characteristics, and implications. *Educational Technology Research and Development*, 67(2), 361–388.
- [11] Hedberg, H., Nouri, J., Hansen, P., & Rahmani, R. (2018). A Systematic Review of Learning Through Mobile Augmented Reality. *International Journal of Interactive Mobile Technologies (IJIM)*, 12(3), 75.
- [12] Higgins, A. (2020). Paradigms, distance learning, education, and philosophy. *Journal of Open, Flexible and Distance Learning*, 24(2), 4–11.
- [13] Holt, R. F., Beer, J., Kronenberger, W. G., Pisoni, D. B., & Lalonde, K. (2012). Cochlear Implant Users' Speech and Language Outcomes: Some Preliminary Findings. *Journal of Speech Language and Hearing Research*, 55(June), 848–864.
- [14] Huang, Y., Wang, Y., Tai, Y., Liu, X., Shen, P., Li, S., Li, J., & Huang, F. (2020). Curricularface: Adaptive curriculum learning loss for deep face recognition. *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*. <https://doi.org/10.1109/CVPR42600.2020.00594>
- [15] Husain, S. (2019). Kontribusi Belajar Jarak Jauh Mahasiswa Tinggal Di Desa Terpencil. *Jurnal Ilmu Pendidikan Nonformal*, 05(02), 45–50.

- [16] Hwa, Y., Kaffenberger, M., & Silberstein, J. (2020). Aligning Levels of Instruction with Goals and the Needs of Students (ALIGNS): Varied Approaches, Common Principles. *RISE: Research on Improving Systems of Education*, 2020(22), 1–25.
- [17] Ismaniati, C., Sungkono, S., & Wahyuningsih, D. (2016). Model Blended Learning Untuk Meningkatkan Kemandirian Belajar Dan Daya Tarik Dalam Perkuliahan. *Jurnal Penelitian Ilmu Pendidikan*, 8(2), 12–23.
- [18] Kearney, W. S., & Garfield, T. (2019). Student Readiness to Learn and Teacher Effectiveness: Two Key Factors in Middle Grades Mathematics Achievement. *RMLE Online*, 42(5), 1–12.
- [19] Kumar, B. A., & Chand, S. S. (2019). Mobile learning adoption: A systematic review. *Education and Information Technologies*, 24(1), 471–487. <https://doi.org/10.1007/s10639-018-9783-6>
- [20] Kumar, B. A., & Goundar, M. S. (2019). Usability heuristics for mobile learning applications. *Education and Information Technologies*, 24(2), 1819–1833. <https://doi.org/10.1007/s10639-019-09860-z>
- [21] Langlois, A. (2020). The School Enterprise Challenge: Learning by doing. *Childhood Education*, 96(4), 22–33.
- [22] Mahmudul Haque, M. (2019). From Cognition, Metacognition to Autonomy: A Framework for Understanding Language Learning Dynamics. *Arab World English Journal*, 12(1), 207–222. <https://doi.org/10.24093/awej/ef11.15>
- [23] Masruroh, F. (2020). Praktek pendidikan jarak jauh di universitas terbuka indonesia. *Edutech*, 19(2), 200–213.
- [24] Mauliyda, M. A., Budiharjo, A., Erfan, M., & Radha, R. (2020). Level Berpikir Metakognisi Mahasiswa Selama Perkuliahan Online Di Masa Pandemi. *Jurnal Pembelajaran Matematika Inovatif*, 3(6), 679–690.
- [25] Moya, S., & Camacho, M. (2021). Design Principles of Mobile Learning Frameworks. *International Journal of Mobile and Blended Learning*, 13(1), 63–80. <https://doi.org/10.4018/IJMBL.2021010105>
- [26] Ne’eman, A., & Shaul, S. (2021). Readiness or Impairment: Cognitive and Linguistic Differences Between Children Who Learn to Read and Those Who Exhibit Difficulties With Reading in Kindergarten Compared to Their Achievements at the End of First Grade. *Frontiers in Psychology*, 12, 1–14.
- [27] Noemí, P.-M., & Máximo, S. H. (2014). Educational Games for Learning. *Universal Journal of Educational Research*, 2(3), 230–238. <https://doi.org/10.13189/ujer.2014.020305>
- [28] Noervadila, I., Yuliana, D., & Puspitasari, Y. (2021). Metode Blended Learning Dalam Meningkatkan Minat Belajar Mahasiswa Melalui Mata Kuliah Psikologi Pendidikan Di Masa Pandemi Covid-19. *Jurnal IKA PGSD (Ikatan Alumni PGSD) UNARS*, 9(1), 248. <https://doi.org/10.36841/pgsdunars.v9i1.1035>
- [29] Oktasari, D., Kuswanto, H., Ismet, I., & M.S., S. (2018). The Technology Pedagogy Knowledge (TPK) Teacher Using Worksheet 3D Pageflip Professional for Promoting Argumentation Skills’ High-Schools Students in Physics Learning. *Jurnal Penelitian & Pengembangan Pendidikan Fisika*, 4(2), 131–140.
- [30] Ozdamli, F., & Cavus, N. (2011). Basic elements and characteristics of mobile learning. *Procedia - Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2011.11.173>
- [31] Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. R. (2020). E-Learning during Lockdown of Covid-19 Pandemic: A Global Perspective. *International Journal of Control and Automation*, 13(4), 1088–1099.
- [32] Restrepo, A., Scheininger, T., Clucas, J., Alexander, L., Salum, G. A., Georgiades, K., Paksarian, D., Merikangas, K. R., & Milham, M. P. (2020). Problematic internet use in children and adolescents: associations with psychiatric disorders and impairment. *BMC Psychiatry*, 20(1), 252
- [33] Ridders, W., Lawrence, D., Hafekost, J., & Zubrick, S. R. (2016). Internet use and electronic gaming by children and adolescents with emotional and behavioural problems in Australia – results from the second Child and Adolescent Survey of Mental Health and Wellbeing. *BMC Public Health*, 16(1), 399. <https://doi.org/10.1186/s12889-016-3058-1>
- [34] Risnani, L. Y., & Husin, A. (2019). Blended Learning: Pengembangan dan Implementasinya pada Mata Kuliah Fisiologi Tumbuhan. *BIOEDUSCIENCE: Jurnal Pendidikan Biologi Dan Sains*, 3(2), 73–83.
- [35] Ruth, E. (2015). Deskripsi Kualitas Layanan Jasa Akses Internet di Indonesia dari Sudut Pandang Penyelenggara. *Buletin Pos Dan Telekomunikasi*, 11(2), 137. <https://doi.org/10.17933/bpostel.2013.110204>
- [36] Sanmee, W., Ruangsang, N., & Kaewketpong, P. (2021). Online Instructional Activities for Creative Internet Use of Tertiary Students in Thailand. *Psychology and Education*, 58(1), 1453–1457.
- [37] Şeren, M., & Özcan, E. (2021). Post pandemic education: Distance education to artificial intelligence based education. *International Journal of Curriculum and Instruction*, 13(1), 212–225.
- [38] Sivinskiy, A. M., Sadykova, A. K., Kulambayeva, K. K., Zhamankarin, M. M., Kukubayeva, A. H., & Koshbayeva, A. N. (2021). Psychological and Pedagogical Components of the Readiness of Children with Hearing Impairments to Learn in the Context of Updated Content of Education. *Economic History*, 25, 401–420.
- [39] Suciati, S. (2017). Interaksi Kesiapan Belajar Dan Kepuasan Terhadap Layanan Pada Pembelajaran Online Program Pascasarjana. *Jurnal Cakrawala Pendidikan*, 36(1), 33–45.

- [40] Sugiyono. (2016a). *Metode Penelitian dan Pengembangan (Research and Development/R&D)*. Bandung: Alfabeta.
- [41] Sugiyono. (2016b). *Metode penelitian kuantitatif kualitatif dan R&D*. Alfa Beta.
- [42] Sulisworo, D., & Permpayoon, K. (2018). What is the Better Social Media for Mathematics Learning? A Case Study at A Rural School in Yogyakarta, Indonesia. *International Journal on Emerging Mathematics Education*, 2(1), 39–56. <https://doi.org/10.12928/ijeme.v2i1.7071>
- [43] Sumarni, S. S., Vianty, M., & Andika, W. D. (2021). Readiness to Learn English for Early Childhood. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(3), 1480–1492. <https://doi.org/10.31004/obsesi.v6i3.1805>
- [44] Tech, I., College, C., Bar, H., & Serving, I. (2020). Supporting Students Through the Student Lifecycle. *Foundation for Excellence in Education*, June, 1–7.
- [45] Tomasetto, C., Morsanyi, K., Guardabassi, V., & O'Connor, P. A. (2021). Math anxiety interferes with learning novel mathematics contents in early elementary school. *Journal of Educational Psychology*, 113(2), 315–329. <https://doi.org/10.1037/edu0000602>
- [46] Wijaya, O. P., & Bukhori, I. (2017). Effect of Learning Motivation, Family Factor, School Factor, and Community Factor on Student Learning Outcomes on Productive Subjects. *Jurnal Pendidikan Bisnis Dan Manajemen*, 3(3), 192–202. <https://doi.org/10.17977/um003v3i32017p192>
- [47] Yusuf, A., & Apriliyanti, T. E. (2020). Mindfulness Based Stress Reduction Interventions and Experiential Learning Method in Supporting Coping Mechanism and Resilience of Family Caregivers of Patients with Cancer: A Systematic Review. *International Journal of Psychosocial Rehabilitation*, 6(2), 56–78. <https://doi.org/10.37200/ijpr/v24sp1/pr201261>
- [48] Zhao, Y. (2021). Build back better: Avoid the learning loss trap. *Prospects*, 13(3), 145–167. <https://doi.org/10.1007/s11125-021-09544-y>.