

Bridging the Digital Divide: Strengths, Weaknesses, and Success Factors of Hybrid Learning Models in Developing Regions

Muhammad Kristiawan^{1*}, Urip Sulistiyo², Dwi Sulisworo³, Nova Asvio⁴,
Mira Tania⁵

¹Universitas Bengkulu, Bengkulu, Indonesia, muhammadkristiawan@unib.ac.id

²Universitas Jambi, Jambi, Indonesia, urip.sulistiyo@unja.ac.id

³Universitas Ahmad Dahlan, Yogyakarta, Indonesia, dwi.sulisworo@uad.ac.id

⁴Universitas Islam Negeri Fatmawati Sukarno Bengkulu, Bengkulu, Indonesia,
novaasvio@mail.uinfasbengkulu.ac.id

⁵Universitas Bengkulu, Bengkulu, Indonesia, miraspekta@gmail.com

*Corresponding author e-mail: muhammadkristiawan@unib.ac.id

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ABSTRACT:

This study aims to evaluate student responses to the implementation of hybrid learning and assess its perceived effectiveness, strengths, and weaknesses within the Master of Educational Administration Program at the University of Bengkulu. A quantitative survey design was employed. Data were collected through structured questionnaires distributed to students to gauge their satisfaction levels and firsthand experiences with the hybrid learning model. The findings indicate strong student satisfaction with hybrid learning. Key strengths identified include enhanced flexibility in managing study time around work commitments, the ability to access lecture materials and recordings from anywhere for independent review, and the development of virtual communication skills. The model was reported to be highly effective, primarily as it eliminates the commute, allows full participation despite work obligations, and facilitates self-paced learning. This study provides a critical perspective by contextualizing the benefits of hybrid learning within the challenges of the Indonesian educational landscape, specifically highlighting the infrastructural limitations (internet and electricity) prevalent in rural areas. It moves beyond general satisfaction metrics to address the applicability and equity of digital learning models. The results necessitate those institutions invest in robust digital infrastructure and provide lecturer training in hybrid pedagogy. For programs serving rural populations, strategic planning must include solutions for offline access and asynchronous participation to ensure equity and inclusivity. This research contributes a framework for higher education institutions, particularly in developing regions, to formulate more effective and equitable hybrid learning models. It offers evidence-based insights for the Master of Educational Administration Program and similar institutions to refine their curriculum

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delivery, ensuring it is both high-quality and accessible to a diverse student body, including working professionals and those in remote areas.

Keywords: Hybrid Learning; Students' Satisfaction Survey; Weaknesses and Strengths

1. Introduction

This study examines hybrid learning among graduate students, particularly the experiences of Master of Educational Administration students with its implementation. Hybrid learning refers to an instructional approach that combines online and face-to-face learning within a single course or learning unit, allowing students to benefit from both direct interaction with lecturers and peers and the flexibility of time and place offered by online learning (Harun et al., 2021). In practice, hybrid learning provides access to digital materials such as recorded lectures, online readings, and discussion forums, while also maintaining in-person sessions for interaction, guidance, and collaborative learning activities (Gultom et al., 2022). Because of this combination, hybrid learning is widely regarded as a promising model that integrates the accessibility of online learning with the immediacy and social value of face-to-face instruction (Hidayat et al., 2022).

The adoption of hybrid learning has increased because it offers several important advantages. It enables greater flexibility for students who face limitations related to time, distance, or other responsibilities outside campus (Makhin, 2021). It also allows institutions to create a more comprehensive learning experience by balancing independent study with direct academic support. In addition, hybrid learning encourages the use of digital technology in teaching and learning, broadens access to resources, supports diverse learning needs, and prepares students for increasingly digital academic and professional environments (Ganovia et al., 2022; Triyono, 2021). For graduate students, these benefits are especially relevant because many must manage academic work alongside professional and personal commitments.

Despite these advantages, the successful implementation of hybrid learning depends on careful planning and supportive conditions. Institutions must define clear learning objectives, design a balanced curriculum, determine which materials are best delivered online or face-to-face, and provide suitable digital platforms for interaction, collaboration, and assessment (Singh et al., 2021). Effective implementation also requires lecturer readiness, accessible learning materials, clear communication, adequate technological infrastructure, and continuous evaluation of the learning process (Afif Rahman Riyanda et al., 2022; Asyrofi & Junaedi, 2016). These requirements show that hybrid learning is not simply a technical combination of two delivery modes, but a pedagogical system that must be designed and managed deliberately.

Hybrid learning is implemented in different ways across institutions and courses. Some programs emphasize synchronous online meetings, while others combine asynchronous materials such as recorded lectures, digital modules, and discussion forums with periodic face-to-face sessions. The balance between online and offline learning depends on curriculum design, institutional policy, technological readiness, and course objectives (Raes, 2022; Simonova et al., 2017). Therefore, hybrid learning should not be understood as a single fixed format, but as a continuum of arrangements that blend physical and virtual learning spaces. These differences matter because students' perceptions and satisfaction are shaped not only by the model itself, but also by how effectively it is designed and implemented.

Student satisfaction is a key indicator of educational quality in hybrid learning. In higher education, satisfaction is often associated with perceived usefulness, teaching quality, engagement, academic support, and the extent to

which the learning environment meets students' academic, social, and psychological needs (Butz & Stupnisky, 2016; So & Brush, 2008). In hybrid contexts, satisfaction is especially important because students must navigate both online and face-to-face modes of participation. As a result, examining student satisfaction provides insight into whether hybrid learning creates an effective and equitable educational experience.

One of the most widely reported strengths of hybrid learning is flexibility. Students value the ability to access materials, review lectures, and complete tasks according to their own pace and schedule (Hall & Villareal, 2015; Potter, 2015). This is particularly important for graduate students and working professionals who must balance study with work and family responsibilities. Hybrid learning can also reduce travel burdens, broaden access to resources, support inclusivity, and strengthen digital literacy, self-regulation, and independent learning skills (Anthonysamy et al., 2020; Butcher & Rose-Adams, 2015; Cavinato et al., 2021).

Despite these benefits, the literature also highlights several challenges. Unequal access to technology, including stable internet and devices, remains a major concern and can reduce participation and satisfaction, particularly for students in disadvantaged contexts (Cheng & Chau, 2016; Cullinan et al., 2021). Another challenge involves reduced connection with lecturers and peers during online participation. Limited interaction and delayed feedback may weaken students' sense of belonging and engagement (So & Brush, 2008). From the Community of Inquiry perspective, meaningful learning depends on the balance of teaching, social, and cognitive presence (Vaughan, 2010). In addition, lecturer readiness is crucial, since hybrid learning requires instructors to manage both online and face-to-face students simultaneously. Without sufficient pedagogical competence, hybrid learning may become fragmented and inconsistent (Al Soub et al., 2021; Ortega-Arranz et al., 2024).

Overall, previous studies suggest that hybrid learning offers important advantages, especially

flexibility, accessibility, and personalization, but also presents challenges related to inequality, interaction, and instructional quality (Castro, 2019; Singh et al., 2022). These mixed findings show that hybrid learning should be evaluated contextually. For this reason, examining the experiences of Master of Educational Administration students at the Faculty of Education, Universitas Bengkulu is important to better understand how hybrid learning functions in a specific graduate education setting.

Research on hybrid learning remains important in higher education because this model continues to evolve in response to technological development and changing student needs. Previous studies have reported generally positive findings, showing that hybrid learning can support instruction across disciplines, increase flexibility, improve access, and serve as an effective post-pandemic learning solution (Aziz et al., 2023; Hendrayati & Pamungkas, 2016; Jumarniati & Ekawati, 2022; Putra, 2015; Sukiman et al., 2022). Some studies have also examined its effectiveness in higher education more broadly (Alducin-Ochoa & Vázquez-Martínez, 2016).

However, a clear research gap remains. Much of the existing literature focuses on the general benefits and feasibility of hybrid learning, but limited attention has been given to the specific experiences of graduate students in Educational Administration programs, particularly in Indonesian universities. In addition, previous studies have not sufficiently examined hybrid learning in an integrated way that includes student engagement, motivation, learning experience, perceived weaknesses, and implementation factors in one context. Therefore, more context-specific research is needed to understand how hybrid learning is experienced by Master of Educational Administration students at the Faculty of Education, Universitas Bengkulu. Based on the above gap, this study addresses the following research questions:

1. What is the impact of hybrid learning on student engagement in the learning process and learning motivation?

2. What factors influence the successful implementation of hybrid learning in the Master of Educational Administration program, Faculty of Education, Universitas Bengkulu?
3. How do students perceive the influence of hybrid learning on their academic engagement and learning experience?
4. What are the weaknesses of hybrid learning according to the perceptions of Master of Educational Administration students, Faculty of Education, Universitas Bengkulu?
5. How effective is hybrid learning in supporting students' learning experiences in this context?

This study contributes to the literature by providing a contextual understanding of hybrid learning in graduate education and by offering evidence that may inform future instructional practice and institutional policy.

2. Methodology

Research Design

This study employed a cross-sectional survey design using a mixed-methods approach to investigate students' responses to hybrid learning in the Master of Educational Administration Study Program. The quantitative strand was used to describe the overall pattern of students' satisfaction and perceptions of hybrid learning, while the qualitative strand was intended to capture students' views in greater depth regarding the strengths, weaknesses, perceived impact, and supporting factors of hybrid learning implementation. This design was considered appropriate because the study did not only seek to identify general tendencies in students' responses, but also to explain the meanings and practical experiences underlying those responses.

Research Context

The study was conducted in the Master of Educational Administration Study Program, Faculty of Teacher Training and Education, Universitas Bengkulu. The context of this study is important because hybrid learning has become

an increasingly relevant instructional model in higher education, particularly in programs where students are required to balance academic activities with professional and personal responsibilities. In this setting, hybrid learning was implemented as a combination of face-to-face and online learning activities, allowing students to participate in lectures more flexibly while still maintaining direct academic interaction.

Participant Profile and Recruitment

The participants of this study were 107 students enrolled in the Master of Educational Administration Study Program. These participants were included because they had direct experience in attending hybrid learning classes and were therefore able to provide informed responses regarding its implementation. The participant selection was purposive in nature, as only students who had experienced hybrid learning were considered relevant to the objectives of the study. Their participation provided data that reflected actual experiences rather than hypothetical opinions about the hybrid learning model.

Researcher Positionality

As this study explored students' perceptions of learning experiences within a specific institutional context, the researchers were aware that interpretation of the data needed to be handled carefully. To reduce potential bias, data were collected through an online questionnaire in which respondents could provide their answers independently. In addition, the inclusion of both closed-ended and open-ended items allowed the researchers to balance numerical patterns with participants' own written explanations. During analysis, the researchers focused on identifying recurring patterns in the data rather than imposing predetermined judgments on students' responses.

Research Instruments

Data were collected using an online questionnaire administered through Google Forms. The questionnaire consisted of two sections. The first section included closed-ended items designed to

examine students' perceptions of hybrid learning across several aspects, including satisfaction, flexibility, access to learning materials, self-management, technical challenges, engagement and motivation, interaction with lecturers and peers, clarity of instructions, and access to academic support. The second section consisted of open-ended questions that invited respondents to elaborate on the greatest strength of hybrid learning, its biggest weakness or challenge, its impact on student engagement and learning motivation, and the factors influencing the success of its implementation. The instrument was therefore designed not only to gather measurable response patterns, but also to obtain explanatory accounts from students' own perspectives.

Data Collection

Data were collected through the online distribution of the questionnaire to students who had experienced hybrid learning in the program. Google Forms was used as the data collection platform because it enabled efficient distribution, flexible participation, and centralized organization of responses. Respondents completed the questionnaire independently, allowing them to provide answers based on their own experiences of hybrid learning. The online format was considered suitable for this study because the topic under investigation was directly related to technology-supported learning practices.

Data Analysis

The data were analyzed using both quantitative and qualitative procedures. Quantitative data obtained from the closed-ended items were analyzed using descriptive statistics to identify the general tendency of students' responses toward hybrid learning. The results were summarized through response frequencies and overall patterns, which were then interpreted to describe students' satisfaction and perceptions of the effectiveness of hybrid learning.

Qualitative data obtained from the open-ended questions were analyzed using thematic analysis. In this process, the responses were read repeatedly, grouped according to similar

meanings, and organized into broader themes. Particular attention was given to themes related to the strengths of hybrid learning, its weaknesses, its impact on engagement and motivation, and the factors influencing its successful implementation. Through this analysis, the qualitative data were used to enrich and explain the quantitative findings.

Data Quality

To enhance the quality of the data, this study combined closed-ended and open-ended responses within a mixed-methods design. This allowed the researchers to compare broad response patterns with more detailed participant explanations. Quantitative data provided an overview of students' general perceptions, whereas qualitative responses offered contextual understanding of why such perceptions emerged. In the qualitative phase, the researchers repeatedly reviewed the responses and refined the thematic grouping to ensure that the categories reflected the content of participants' answers. This combination of descriptive breadth and thematic depth strengthened the overall credibility of the findings.

Ethical Considerations

Ethical principles were taken into account throughout the study. Participation in the survey was voluntary, and respondents were informed that the data would be used only for academic purposes. The questionnaire did not require respondents to disclose unnecessary personal identifiers, and confidentiality of the responses was maintained in reporting the findings. The study focused on students' perceptions of hybrid learning, and the data were presented in aggregate and thematic form to protect participants' privacy.

3. Results

This section presents the findings from 107 students enrolled in the Master of Educational Administration program and discusses them in relation to the research questions. The findings are organized into four parts: respondent profile and digital readiness, quantitative results on student perceptions of hybrid learning, qualitative

themes derived from open-ended responses, and an integrated discussion aligned with the research questions.

Respondent Profile and Digital Readiness

Before examining students' perceptions of hybrid learning, the survey first established the respondents' demographic profile and initial familiarity with digital tools.

Table 1. Respondent Profile and Digital Readiness (N = 107)

Variable	Category	n	%
Sex	Male	30	28.0
	Female	77	72.0
Familiarity with digital tools before hybrid learning	Very unfamiliar	2	1.9
	Somewhat unfamiliar	5	4.7
	Neutral	10	9.3
	Somewhat familiar	25	23.4
	Very familiar	65	60.7

As shown in Table 1, most respondents were female (72.0%), while 28.0% were male. More importantly, the respondents generally entered hybrid learning with a strong level of digital readiness. A total of 84.1% reported being somewhat familiar or very familiar with digital tools such as learning management systems and video conferencing platforms, whereas only 6.6% reported unfamiliarity. This finding is important because digital familiarity provides a necessary foundation for participation in hybrid learning. In

this case, the students were not beginning from a low-technology baseline, which may partly explain their generally positive perception of the model.

Quantitative Results on Student Perceptions of Hybrid Learning

The survey included closed-ended items on satisfaction, flexibility, access to materials, self-management, technical problems, engagement, and interaction.

Table 2. Quantitative Results on Students' Perceptions of Hybrid Learning (N = 107)

Item	Response Category	n	%
Overall satisfaction with the hybrid learning model	Very dissatisfied	1	0.9
	Dissatisfied	1	0.9
	Neutral	14	13.1
	Satisfied	51	47.7
	Very satisfied	40	37.4
The flexibility to attend sessions remotely is a valuable strength	Strongly disagree	1	0.9
	Disagree	2	1.9
	Neutral	11	10.3
	Agree	45	42.1
	Strongly agree	48	44.9
Recorded lectures and online materials help me learn at my own pace	Strongly disagree	1	0.9
	Disagree	2	1.9

Hybrid learning has improved my time management and self-discipline	Neutral	11	10.3
	Agree	45	42.1
	Strongly agree	48	44.9
	Strongly disagree	1	0.9
I experience technical issues that disrupt my learning	Disagree	0	0.0
	Neutral	13	12.1
	Agree	55	51.4
	Strongly agree	38	35.5
	Never	13	12.1
	Rarely	28	26.2
	Sometimes	42	39.3
	Often	13	12.1
I find it difficult to stay motivated and engaged during online portions	Always	11	10.3
	Strongly disagree	11	10.3
I feel a lack of connection and interaction with my instructors	Disagree	49	45.8
	Neutral	18	16.8
	Agree	21	19.6
	Strongly agree	8	7.5
	Strongly disagree	12	11.2
	Disagree	49	45.8
	Neutral	15	14.0
	Agree	21	19.6
I feel a lack of connection and interaction with my fellow students	Strongly agree	10	9.3
	Strongly disagree	17	15.9
	Disagree	43	40.2
	Neutral	16	15.0
	Agree	23	21.5
	Strongly agree	8	7.5

The quantitative findings suggest that students generally perceived hybrid learning positively. Overall, 85.1% of respondents reported being satisfied or very satisfied with the model, while only 1.8% expressed dissatisfaction. This shows that the hybrid approach was broadly well received in the program.

The strongest endorsement was given to flexibility and self-paced learning. A total of 87.0% agreed or strongly agreed that remote attendance is a valuable strength, and the same proportion agreed that recorded lectures and online materials helped them learn at their own pace. In addition, 86.9% agreed or strongly agreed that hybrid learning improved their time management and self-discipline. These findings

suggest that hybrid learning was valued not only for convenience, but also for supporting more autonomous learning habits.

At the same time, the survey revealed notable challenges. Technical disruptions remained common, with 61.7% reporting that they experienced such problems sometimes, often, or always. Although most respondents did not report severe difficulty staying motivated during online sessions, 27.1% still agreed or strongly agreed that motivation and engagement were difficult to maintain. Similarly, while most students disagreed that they lacked connection with lecturers or peers, nearly one-third still perceived weakened interaction in the hybrid environment. This indicates that the model

worked well for the majority, but not equally well for all students.

Qualitative Results

The open-ended questions generated richer insights into how students interpreted the strengths, weaknesses, impacts, and success factors of hybrid learning.

Table 3. Main Themes from Open-Ended Responses

Question	Main Themes	Illustrative Meaning
Greatest strength of hybrid learning	Flexibility, convenience, personalization, efficiency	Hybrid learning accommodates schedules, learning pace, and different needs
Biggest weakness/challenge	Unequal access to technology, technical issues, uneven engagement, limited feedback, “split classroom”	Online students may receive less attention and experience weaker participation
Impact on engagement and motivation	Mixed impact; potentially positive but conditional	Engagement can improve through flexibility and varied activities, but depends on guidance and self-discipline
Factors influencing success	Lecturer readiness, digital competence, clear instructional design, reliable infrastructure, student motivation, communication, institutional support	Successful hybrid learning depends on pedagogical, technological, and organizational alignment

The qualitative findings strongly reinforce the quantitative patterns. Students repeatedly identified flexibility as the greatest strength of hybrid learning. They described the model as practical, convenient, and adaptable, enabling them to balance study with work and other responsibilities. Students also appreciated the combination of online accessibility and face-to-face clarification, indicating that hybrid learning was valued because it merged convenience with instructional support.

However, the open-ended responses also revealed a more critical issue: the tendency of hybrid learning to create a “split classroom.” Students noted that those attending in person often received more direct attention, interaction, and feedback than those participating online. This suggests that the weakness of hybrid learning is not merely technological, but also pedagogical and relational. Even when students are generally satisfied, unequal participation can still occur.

RQ1. What is the impact of hybrid learning on student engagement and learning motivation?

The findings show that the impact of hybrid learning on engagement and motivation is mixed. On the positive side, flexibility, varied learning activities, and access to recorded materials can support student participation and motivation. This is especially important for graduate students who must balance academic demands with employment and family responsibilities. However, the positive effect is not automatic. A notable minority reported difficulty staying motivated during online sessions, and qualitative responses indicated that engagement depends heavily on lecturer guidance, interaction quality, and students’ self-discipline. Thus, hybrid learning can promote engagement, but only under supportive instructional conditions.

RQ2. What factors influence the success of hybrid learning implementation?

The findings indicate that successful implementation depends on three interrelated groups of factors: pedagogical, technological, and

organizational. Pedagogically, students emphasized lecturer readiness, digital competence, clear instructions, and interactive learning materials. Technologically, reliable internet access, stable platforms, and effective LMS use were seen as essential. Organizationally, communication, student self-regulation, and institutional support were also highlighted. These findings suggest that hybrid learning should be understood as a system rather than as a delivery format alone. Technology by itself is insufficient unless it is supported by sound pedagogy and institutional coordination.

RQ3. How do students perceive the effectiveness of hybrid learning in supporting their academic engagement and learning outcomes?

Students generally perceived hybrid learning as effective. The high level of overall satisfaction and the strong agreement regarding flexibility, access to materials, and improved self-management indicate that students considered the model supportive of their learning experience. Although this study did not directly measure objective academic achievement, students' responses suggest that hybrid learning supported academic engagement through accessibility, continuity, and adaptable learning opportunities. However, the findings also show that effectiveness is uneven. Students with better self-discipline and better access to technology appear more likely to benefit fully from the model.

RQ4. What are the weaknesses of hybrid learning according to students' perceptions?

The major weaknesses identified by students were technical disruptions, unequal access to stable internet and devices, reduced interaction, and uneven participation between online and in-person students. The most notable qualitative finding was the "split classroom" phenomenon, in which remote students may become less visible and less engaged than those physically present. This is a critical concern because it points to inequity within the same learning environment. Therefore, the weaknesses of hybrid learning are not limited to infrastructure alone, but also

include challenges in maintaining social presence and instructional balance.

RQ5. How effective is hybrid learning as an instructional model in this context?

Taken together, the findings suggest that hybrid learning is effective in this context, but only conditionally. It is effective because it provides flexibility, improves access to learning resources, and supports time management and self-discipline. Yet its effectiveness depends on whether the institution can address technical barriers, maintain interaction, and ensure equitable participation. Hybrid learning, therefore, should not be treated simply as a combination of online and face-to-face instruction, but as a pedagogical model requiring deliberate design and continuous refinement.

4. Discussion

This study aimed to evaluate student satisfaction with hybrid learning in a Master's program, focusing on its strengths, weaknesses, and conditions for successful implementation. Overall, the findings show that hybrid learning is a promising but complex instructional model. Students highly valued its flexibility, accessibility, and potential to support individualized learning. At the same time, they identified important challenges related to engagement, social interaction, instructional equity, and technological reliability. These findings indicate that hybrid learning is neither inherently effective nor ineffective; rather, its value depends on how well pedagogical, technological, and social dimensions are aligned.

The most consistent finding was the importance of flexibility. Students identified flexibility as the greatest strength of hybrid learning in both quantitative and qualitative responses. This supports previous studies showing that flexibility and access are central reasons for adopting blended and hybrid models (Ali, 2024; Porter et al., 2016). For graduate students who often balance study with work and family responsibilities, the opportunity to attend classes online, participate in person when possible, and access materials beyond class time is especially valuable. In this sense, flexibility is not simply a

convenience, but an enabling condition for continued participation in higher education.

The findings also show that hybrid learning can support time management and broaden access to learning opportunities. Students reported that hybrid lectures allowed them to adjust attendance to work schedules and other commitments, making it easier to remain active in the program. The possibility of attending from home or from locations far from campus was seen as a major practical advantage (Chen & Chiou, 2014; Feubli et al., 2024). Students also noted that hybrid learning helped them manage lecture time more effectively and maintain attendance when in-person participation was not possible. These results reinforce earlier studies emphasizing the accessibility and convenience of hybrid learning, particularly for students with professional responsibilities or geographical constraints (Alducin-Ochoa & Vázquez-Martínez, 2016; Simonova et al., 2017).

Students also perceived hybrid learning as beneficial for academic support and access to learning resources. They noted that lecturers could provide materials in both online and face-to-face forms, making content easier to access and review (Feubli et al., 2024; Singh et al., 2021). Hybrid learning also familiarized students with digital platforms and collaboration tools relevant to future academic and professional needs (Isaias et al., 2020). At the same time, face-to-face sessions remained important for clarification, discussion, and social connection with lecturers and peers (Gultom et al., 2022; Putra, 2015). Thus, hybrid learning offered a more diverse and potentially personalized learning experience.

However, these benefits were accompanied by significant challenges. The most serious concern was the weakening of social interaction and engagement. Students reported feeling less connected to lecturers and peers, especially during online participation. This is consistent with (Vaughan, 2010) Community of Inquiry framework, which emphasizes the importance of teaching presence, cognitive presence, and social presence. The findings suggest that hybrid learning in this context did not always sustain

social presence effectively, particularly for remote participants. When students feel less visible and less involved, the quality of the educational experience may decline.

A particularly important contribution of this study is the identification of the “split classroom” phenomenon. Students perceived that those physically present in class often received more attention, faster feedback, and greater opportunities to participate than online students. This reflects not only a general interaction problem, but a specific issue of inequity within synchronous hybrid teaching. The finding aligns with (Ortega-Arranz et al., 2024), who identify coordination and orchestration as major challenges in hybrid classrooms. If lecturers cannot balance attention between in-person and online participants, hybrid learning may unintentionally create a two-tiered classroom experience.

The findings also show that the success of hybrid learning is highly dependent on mediating factors. Students did not view hybrid learning as automatically increasing engagement or motivation. Instead, its effectiveness depended on clear instruction, effective interaction, reliable technology, and strong self-discipline. This supports (Van Laer & Elen, 2017) argument that self-regulated learning is essential in online and blended environments. Students with stronger self-regulation are more likely to benefit from hybrid learning, while those with weaker self-management may struggle. Similarly, respondents emphasized that instructor competence, student readiness, and technological infrastructure must work together. If one of these elements is weak, the overall effectiveness of hybrid learning is reduced.

Several limitations should be noted. First, the study involved 107 students from a single Master’s program at one university, limiting generalizability. Second, the findings were based on self-reported perceptions, which may not fully reflect objective learning outcomes. Third, the qualitative data came from brief open-ended responses, which may not capture the full depth of student experience. Finally, the cross-sectional

design provides only a snapshot at one point in time. Future research should include larger and more diverse samples, use longitudinal designs, and examine lecturers' perspectives on managing hybrid classrooms. Observational studies and design-based research may also help identify strategies to improve equity and social presence. In addition, future studies should connect student perceptions with objective indicators such as grades, participation, and assignment quality.

In conclusion, this study shows that hybrid learning is both enabling and demanding. Its main strengths lie in flexibility and accessibility, but its effectiveness depends on interaction quality, pedagogical design, technological support, and student self-regulation. Hybrid learning should therefore be understood not simply as a technical blend of online and face-to-face delivery, but as a pedagogical system requiring careful design to ensure equitable and meaningful learning experiences.

5. Conclusion

This study examined graduate students' perceptions of hybrid learning in the Master of Educational Administration program, focusing on its effectiveness, strengths, weaknesses, and the factors influencing its implementation. Overall, the findings indicate that hybrid learning is perceived as a valuable and relevant instructional model because it offers flexibility, broader access to learning, and opportunities to combine online and face-to-face interaction. However, its effectiveness is not automatic; rather, it depends on how well pedagogical, technological, and social dimensions are managed. In relation to the research questions, several conclusions can be drawn. First, hybrid learning was perceived to have both positive and challenging effects on student engagement and motivation. It supported participation by enabling students to manage academic responsibilities alongside work and other commitments, although some students reported reduced motivation during online participation. Second, the success of hybrid learning was influenced by interrelated factors, including

reliable internet access, clear instructional design, lecturer competence, student self-discipline, and the availability of accessible learning materials. Third, students generally perceived hybrid learning as effective in supporting their academic engagement and learning experience, especially in terms of flexibility, access to resources, and continuity of learning. Fourth, the main weaknesses identified were technical problems, unequal access to stable internet and devices, reduced social interaction, and the tendency for remote students to feel less involved than those attending in person. Fifth, hybrid learning was considered effective when it balanced the convenience of digital access with the benefits of direct classroom interaction. These findings have important implications for higher education institutions. Universities should not treat hybrid learning merely as a technical combination of online and face-to-face delivery, but as a pedagogical system requiring careful planning and continuous refinement. To maximize its benefits, institutions need to invest in reliable digital infrastructure, learning platforms, and faculty development programs that prepare lecturers to manage hybrid learning effectively. Academic policies should also be responsive to the needs of graduate students, especially those balancing study with professional responsibilities. This study has several limitations. It involved only 107 students from a single Master's program at one university, which limits generalizability. It also relied on self-reported perceptions rather than objective indicators of academic performance or classroom behavior. In addition, the qualitative data were based on open-ended questionnaire responses, which may not fully capture the depth of students' experiences, and the cross-sectional design provides only a snapshot at one point in time. Future research should involve larger and more diverse samples, use longitudinal designs, and examine objective indicators such as academic performance, attendance, or course completion. Qualitative studies using interviews, focus groups, or classroom observations would also provide deeper insight. Further attention should be given to issues of digital inequity to ensure that the flexibility of hybrid learning does not reduce

inclusion and equal participation. Overall, hybrid learning has strong potential in graduate

education, but its success depends on intentional design and continuous improvement.

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Author Declaration

- We confirm this paper is originality of work
- We state this paper no conflicts of interest

Authors' Biography

First author

Muhammad Kristiawan is an Associate Professor of Education in Universitas Bengkulu. Currently he serves as lecturer in Master of Educational Administration Study Program of Universitas Bengkulu. His research area is about leadership, supervision, management of education, administration of education, science of education, social science and technology. He has ever performed as international speakers in many international conferences both India, Philippines, Vietnam, and Indonesia. He has reviewed a lot of articles from reputable international journal which published by Sage, Frontiers, Springer Nature, Taylor & Francis, Humanities & Social Sciences Communications, Npj Climate Action, Intelektual Pustaka Media Utama, Journal of Learning for Development, International Journal of Learning, Teaching and Educational Research and others. For more detail information about Muhammad Kristiawan, you can contact e-mail: muhammadkristiawan@unib.ac.id Orcid ID: <https://orcid.org/1454-1467-1454-1467> See the following link Google Scholar: <https://scholar.google.com/citations?user=Wv7tx2kAAAAJ>

Second author

Urip Sulistiyo is a Senior Lecturer at Faculty of Teacher Training and Education, Universitas Jambi, Indonesia from 2003 to date. His research interest is in the areas of language teaching and education, curriculum and material development, teacher professional development, and applied linguistics. Urip has published a number of articles in reputable Journals such as CALL-EJ Journal, The Qualitative Report, Journal of Language and Education, 1454-1467 Education journal, Indonesian Journal of Applied Linguistics, LEARN journal and other International Journals. e-mail: urip.sulistiyo@unja.ac.id **Orcid ID:** <https://orcid.org/1454-1467-1454-1467> See the following link Google Scholar: <https://scholar.google.com/citations?user=30dY8F0AAAAJ&hl=en>

Third author

Dwi Sulisworo has expertise in educational technology. He is a scholar at Education Field, Graduate School of Universitas Ahmad Dahlan, Yogyakarta, Indonesia. His current research is related to OER, mobile technology, mobile learning, e-learning, MOOCs, learning media development, TPACK framework, and learning strategy, e.g., problem-based learning, project-based learning. e-mail: dwi.sulisworo@uad.ac.id Orcid ID: <https://orcid.org/1454-1467-1454-1467> See the following link Google Scholar: <https://scholar.google.com/citations?hl=id&user=4pIBZzsAAAAJ>

Fourth author

Nova Asvio has expertise in education and learning. She is a scholar at Education and Learning Field, Undergraduate Program of Madrasah Ibtidaiyah Teacher Education of Tarbiyah and Tadris Faculty of Universitas Islam Negeri Fatmawati Sukarno Bengkulu, Indonesia. Her current research is related to Educational and Learning Management, Educational Organization Management, Educational Organization Behavior Management, Islamic Education Management, Inclusive Education Management, and Leadership. e-mail: novaasvio@mail.uinfasbengkulu.ac.id Orcid ID: 1454-1467-1454-1467. See the following link Google Scholar: <https://scholar.google.co.id/citations?hl=en&user=ljivXhwAAAAJ>

Fifth Author

Mira Tania is a doctoral student in English language education at the Universitas Bengkulu, Indonesia. Her research interests include foreign language, English language teaching, academic writing, and education research studies. She has published articles and books in the field of education and applied linguistics, including a Scopus-indexed publication. For more detailed information about Mira Tania, you may contact e-mail: miraspekta@gmail.com with ORCID iD: <https://orcid.org/1454-1467-1454-1467> and also Google Scholar Profile: <https://scholar.google.com/citations?hl=en&user=9OngNdkAAAAJ>