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# PERFORMING HYBRID LEARNING AT ISLAMIC HIGHER EDUCATION INSTITUSIONS FOR MITIGATING LEARNING LOSS

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**ABSTRACT**
This research delves into the integration of hybrid learning amidst digital disruption, targeting the reduction of learning gaps within PTKI (Islamic Higher Education Institutions) context. Utilizing a blend of quantitative analysis of student data and qualitative methods including interviews, surveys, and observations across three PTKIs in South Sumatra, Indonesia, the study evaluates the effectiveness of hybrid learning in mitigating learning loss. Results highlight that the combination of virtual and traditional classroom elements through hybrid learning significantly narrows learning deficits, enhances student involvement, and fosters better academic outcomes. These findings serve as a valuable contribution to understanding hybrid learning practices specifically within PTKI settings, shedding light on its potential in addressing educational challenges amid digital advancements.

Keywords: Higher Education Institution, Hybrid Learning, Learning Loss, Mitigation

***ABSTRAK***
*Penelitian ini mengivestigasi penerapan integrasi pembelajaran hybrid di era disrupsi digital dengan sasaran pengurangan kesenjangan pembelajaran dalam konteks PTKI (Perguruan Tinggi Islam). Penelitian ini memanfaatkan perpaduan analisis kuantitatif data siswa dan metode kualitatif termasuk wawancara, survei, dan observasi di tiga PTKI di Sumatera Selatan, Indonesia. Penelitian ini mengevaluasi efektivitas pembelajaran hybrid dalam memitigasi learning loss. Hasil penelitian menunjukkan, integrasi ruang kelas virtual dan tradisional melalui pembelajaran hibrid secara signifikan mempersempit defisit pembelajaran, meningkatkan keterlibatan siswa, dan mendorong hasil akademik yang lebih baik. Temuan-temuan ini memberikan kontribusi berharga untuk memahami praktik pembelajaran hibrid khususnya di lingkungan PTKI, dan menyoroti potensinya dalam mengatasi tantangan pendidikan di tengah kemajuan digital.*

*Kata Kunci: Learning Loss, Mitigasi, Pembelajaran Hybrid, Pendidikan Tinggi*

## INTRODUCTION

The evolution of pedagogy has been greatly influenced by the progression of learning theories or pedagogy through time (Akpan & Kennedy, 2020; Campbell & Norton, 2007). In the 20th century, the emergence of behaviorist theory paved the way for computer-assisted learning. Presently, in the 21st century, learning methodologies are evolving, primarily relying on computer-based approaches (Harasim, 2017; Muhajirah, 2020). One of the technology-driven learning trends that has gained significant traction in higher education and holds the potential to become a lasting paradigm is hybrid learning (Benito et al., 2021). Hybrid learning is widely known as a learning approach that combines face-to-face and online learning modes (Idris, 2022). It is popular, especially in terms of service-learning courses (Yusof et al., 2021). This hybrid learning is seen as having advantages because it is adaptive to the times, creates a flexible and interesting learning ecosystem, presents a combination of face-to-face and online teaching to meet various student needs and preferences (Abi Raad & Odhabi, 2021).

Hybrid learning features several advantages and potential such as to facilitate student engagement and the development of essential skills (Yusof et al., 2021). It can be realized through the integration of gamification elements, such as animated videos, quizzes, collaboration rooms, discussion rooms, case studies and projects (Yusof et al., 2021). Thus, hybrid learning can certainly improve complex thinking skills (Baena-Rojas et al., 2022; Ramírez-Montoya et al., 2022) and create space for students to participate in learning activities, both virtual and real (Idris, 2022). This can be based on a conceptual framework that has been widely proposed to guide the integration of educational technology and increase student engagement in hybrid learning environments (Bond & Bedenlier, 2019). This framework emphasizes the importance of creating interactive and collaborative learning experiences for students (Okada et al., 2012).

Currently, many educational institutions have implemented various learning approaches that are adaptive to technological developments, including online learning, hybrid and blended learning. Several studies have reported the implementation and benefits of hybrid learning in higher education institution (HEI). Hybrid learning offers the opportunity to incorporate expertise outside the institution which means that students are exposed to a wider range of views and ideas, due to collaboration and relationships between students to create a richer learning experience (Bell et al., 2014; Bower et al., 2015), including its connection to deep learning (O'Mahony et al., 2020), experiential learning theory (Ferreira, 2020), collaboration in hybrid learning environments (Carrruana Martín et al., 2022), pedagogical models (González-Víllora et al., 2019), group cohesion in online learning (Hirkani et al., 2022), lifelong learning (Nørgård, 2021)(Eynon & Malmberg, 2021; Nørgård, 2021), and learning in digital environments (Zhao et al., 2019). They provide valuable insights into various aspects of hybrid learning and their contribution to the understanding and development of effective hybrid learning practices. The widespread adoption of adaptive learning approaches, particularly hybrid learning, in educational institutions reflects a dynamic response to technological advancements. The integration of expertise from external sources in hybrid learning not only broadens students' perspectives but also fosters collaboration and relationships, creating a more enriching learning experience. The diverse studies cited underscore the multifaceted benefits of hybrid learning, offering valuable insights that contribute to the ongoing refinement and enhancement of effective hybrid learning practices in higher education.

However, it is important to note that there are still gaps in research on hybrid learning. A systematic literature review has identified the need for further investigation into hybrid or blended synchronous learning and its impact on student learning outcomes (Raes et al., 2020). Several studies (Butz & Stupnisky, 2017; Olt, 2018; Zydney et al., 2019)(Butz et al., 2016; Olt, 2018; Zydney et al., 2019), Raes et al., (2020) conclude that the majority of research on

synchronous hybrid learning is still in its early stages. As with any complex learning environment, initial development and research raise more questions (Raes et al., 2020). As an emerging practice, hybrid learning requires a wealth of empirical evidence to complement information through qualitative case studies. While hybrid learning has gained recognition, there remains a critical need for more extensive research, especially concerning hybrid or blended synchronous learning. The existing literature underscores that the majority of studies in this area are in their early stages, emphasizing the ongoing nature of inquiry into the effectiveness and nuances of synchronous hybrid learning. As an emerging educational practice, the development of a robust empirical foundation, alongside qualitative case studies, is imperative for a comprehensive understanding of the complexities associated with hybrid learning.

Therefore, based on recommendations from previous studies, hybrid learning in the future should be directed at: (1)Research on a larger and more diverse sample size to increase generalizability and also provide additional statistical power to identify the impact of hybrid learning, 2) The research uses empirical and longitudinal data to investigate the impact of group membership over time, 3) Research includes real-time empirical data about student experiences such as engagement, social presence, or social belonging are multidimensional concepts that are difficult to measure. In addition to self-report data, multimodal learning analytics can be used to better capture and compare student experiences in different learning environments, 4) Investigate the most scalable approaches with respect to technical and pedagogical capacities and limitations, and 5) Examining the impact of hybrid learning on student learning processes and outcomes as a whole and specifically investigating the effectiveness of specific pedagogical scenarios (e.g. quizzes and polls, breakout sessions) to maximize students' learning experience and social presence (Raes et al., 2020). The future direction of hybrid learning, as suggested by previous studies, should prioritize research efforts aimed at expanding sample sizes for greater generalizability and statistical power. The incorporation of empirical and longitudinal data, especially in studying the impact of group membership over time, is crucial for a comprehensive understanding of hybrid learning dynamics. Additionally, utilizing multimodal learning analytics, alongside self-report data, can enhance the measurement of multidimensional student experiences. Future investigations should focus on scalable approaches considering both technical and pedagogical capacities while delving into the broader impact of hybrid learning on student learning processes and specific pedagogical scenarios to optimize overall learning experiences and social presence.

This study seeks to address the research gaps outlined earlier by delving into several key aspects. First, it investigates the impact of hybrid learning on both student learning outcomes and their level of engagement in the learning process. Additionally, it assesses the readiness of Islamic HEI to embrace and effectively implement hybrid learning methods. Crucially, the research explores the strategies employed by Islamic educational institutions to alleviate learning loss and ensure the efficacy of online learning. This includes examining practices such as the adoption of widely-used online platforms, faculty training initiatives, the provision of flexible learning schedules, integration of multimedia components, emphasis on regular feedback and assessment mechanisms, cultivation of a sense of community and spiritual involvement, provision of tutoring and support services, active involvement of parents in the learning journey, ensuring equitable access to learning resources, and addressing the mental and emotional well-being of students. This study fills critical research gaps by comprehensively investigating the impact of hybrid learning on student outcomes and engagement, evaluating the readiness of Islamic Higher Education Institutions for the adoption of hybrid methods, and exploring effective strategies employed to enhance online learning efficacy. The multifaceted examination of practices, from technological adoption to pedagogical approaches and holistic support

services, contributes valuable insights for the advancement of hybrid learning in Islamic educational contexts.

Learning loss arises when students are unable to attain comprehensive academic knowledge and skills due to the learning gaps that emerge during campus closures (Kuhfeld et al., 2020; Solihat et al., 2022). This phenomenon doesn't solely affect academic accomplishments but extends to the development of critical skills and competencies (Schleicher, 2020). A reduction in opportunities for collaborative work, hands-on experience, and practical training has impeded the acquisition of essential skills necessary for future workforce readiness (Aliyyah et al., 2023; Schleicher, 2020). This presents a substantial challenge for Islamic HEI in their mission to ensure that graduates are well-equipped with the essential skills to succeed in the 21st century. The learning loss experienced by students can also have a significant impact on their psychological well-being (Maba et al., 2023). Susanto (2022) highlights the conspicuous nature of learning loss, particularly in the context of English language learning at Islamic HEI. Furthermore, there is additional evidence indicating the prevalence of learning loss in Indonesia. Data from the World Bank reveals that, in 2020, Indonesian students, particularly those from rural areas and low-income families, experienced an average learning loss of 0.8 months of schooling (Azhari & Fajri, 2022). In a conceptual sense, learning loss signifies the erosion of learning outcomes due to remote learning policies, leaving students with less knowledge than they would have gained through traditional, in-person learning(Mursidi et al., 2023). The pervasive issue of learning loss, exacerbated by campus closures, extends beyond academic achievements to hinder the development of critical skills and competencies, posing a considerable challenge for Islamic Higher Education Institutions. The impact on psychological well-being, as highlighted in recent studies, further emphasizes the urgency of addressing this phenomenon. Notably, the discernible nature of learning loss, especially in English language learning at Islamic HEIs and its prevalence in Indonesia, underscores the need for targeted interventions and policy considerations to mitigate the erosion of learning outcomes associated with remote learning policies.

Presently, HEI in Indonesia are in the process of adopting hybrid learning. Essentially, hybrid learning blends face-to-face instruction with online learning, integrating technological advancements into both in-person and virtual learning. This approach harnesses the strengths of both traditional classroom education and online methods. Hybrid learning can take place in either synchronous or asynchronous settings. Synchronous learning involves real-time, simultaneous interactions between learners and instructors, while asynchronous learning allows learners and educational resources to engage at any time and from any location. The ongoing adoption of hybrid learning by Higher Education Institutions in Indonesia signifies a pivotal shift towards a flexible and technology-integrated educational model. By seamlessly combining face-to-face instruction with online learning, the hybrid approach optimally utilizes the strengths of traditional classroom settings and virtual platforms. The versatility of synchronous and asynchronous modes within hybrid learning further emphasizes its adaptability to diverse learning preferences and schedules.

Synchronous learning can be categorized into two distinct formats. The first is synchronous physical learning, which encompasses learning activities taking place at the same time and location between students and instructors. The second format, referred to as virtual synchronous learning, involves students and instructors engaging in learning at the same time but from different locations. Similarly, asynchronous learning can be divided into two types. First, collaborative asynchronous learning encompasses a learning process that allows learners and instructors to study at their own pace from any location and at any time, often involving collaborative elements like discussion forums, assignments, and mailing lists. Second, self-paced directed asynchronous learning is a learning process that provides learners and instructors the

flexibility to study independently at any time and place, typically involving activities like reading online articles, watching videos, and presentations. The diversity within synchronous and asynchronous learning formats adds richness to the educational landscape. Synchronous learning, whether physically or virtually conducted, offers real-time engagement, while asynchronous learning, whether collaborative or self-paced, provides flexibility for learners and instructors. The various modes cater to different preferences and learning styles, highlighting the adaptability and inclusivity inherent in contemporary educational approaches.

However, the implementation of this strategy must be approached with careful consideration. This is due to the presence of various challenges related to hybrid learning that can be encountered by both teachers and students (Real et al., 2022). Challenges such as the absence of in-person interaction, issues concerning technology access, and the level of support provided by teachers and parents are some of the factors that may potentially impede the effectiveness of the hybrid learning approach (Riadi et al., 2022). In the context of addressing the issue of learning loss, Islamic HEI in Indonesia must adopt effective strategic measures. This study investigated strategic approaches that could be employed to proactively combat the risk of learning loss. These approaches encompassed several pivotal components, including the utilization of digital technology, alterations in teaching methodologies, the provision of student support and mentorship, and the promotion of collaborative efforts among Islamic HEI.

In conclusion, while the adoption of hybrid learning holds promise in mitigating learning loss, careful consideration is paramount due to the challenges it presents. Recognizing the potential impediments related to in-person interaction, technology access, and support mechanisms is crucial for effective implementation. To address these challenges, Islamic Higher Education Institutions in Indonesia can proactively employ strategic measures, as investigated in this study. These encompass leveraging digital technology, modifying teaching methodologies, offering robust student support and mentorship, and fostering collaborative efforts among institutions, providing a comprehensive framework to navigate the complexities of hybrid learning and combat potential learning loss.

## METHOD

This study investigates the integration of hybrid learning and assesses the effectiveness of strategic measures in addressing learning loss within Islamic HEI in Indonesia. The research employs a qualitative approach to delve into intricate matters intertwined with various factors that warrant consideration, with the goal of obtaining a more comprehensive understanding of the obstacles and prospects for minimizing the risk of learning loss. The research centers on three Islamic HEI in the southern region of Sumatra, which have implemented hybrid learning: Universitas Islam Negeri (UIN) Sultan Thaha Saifuddin Jambi, Universitas Islam Negeri (UIN) Raden Fatah Palembang, and Universitas Islam Negeri (UIN) Raden Intan Lampung, Indonesia.

These cases may encompass individuals, organizations, or activities bounded by specific criteria. The foundational design for constructing mixed methods case studies can take one of three basic forms, with the most prevalent approach being the use of a convergent design to formulate or interpret the cases (Creswell & Clark, 2017). The study participants include institutional leaders, educators, students, and administrative personnel involved in the hybrid learning process. The selection of research informants is conducted using a purposive sampling technique. Data collection involves various techniques: a) conducting in-depth interviews, b) analyzing documents, pertinent research findings, and teaching-related documents by educators, and c) observing the teaching and learning processes during the implementation of hybrid learning. Data sources comprise campus leaders, teachers delivering courses in the relevant study programs, as well as first and third-semester or second and fourth-semester students for the academic year 2021-2022.

Structured interviews were conducted through various means, including face-to-face interactions, telephone conversations, and Google Forms. These interviews were designed to delve into several aspects, including the policies established by institutional leaders regarding hybrid learning and its implementation. They also aimed to capture the perspectives of both teachers and students concerning hybrid learning. Furthermore, the interviews addressed the challenges encountered during the hybrid learning process, the extent of learning loss attributed to hybrid learning, and the strategies employed by teachers to counteract the effects of learning loss. Additionally, a review of pertinent policy documents was conducted to access the necessary data for analysis. The acquired data was subsequently subjected to an inductive method to evaluate the empirical findings and align them with established principles. The research procedure is presented in Figure 1.

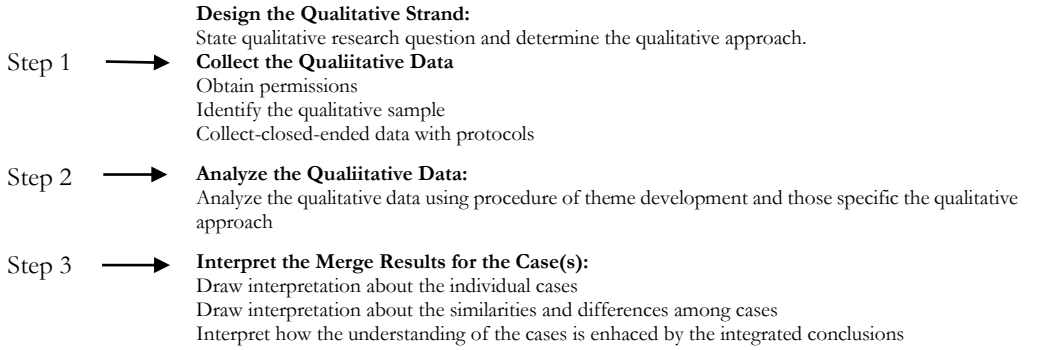


Figure 1. Research Procedure

## RESULTS AND DISCUSSION

### Implementation of Hybrid Learning at Islamic HEI

The implementation of hybrid learning in Islamic HEI requires thorough preparation. It involves infrastructural adjustments which need to be made, including improving Wifi networks, modifying class schedules, and arranging classroom setups. The limitation on the number of students allowed to attend in-person lectures is the primary reason for adopting the hybrid learning model. This approach combines both face-to-face and online learning, where some students participate in physical classes, while others join virtually. Embarking on the integration of hybrid learning in Islamic Higher Education Institutions demands meticulous planning and infrastructural adjustments. This transformative initiative necessitates enhancements to Wifi networks, modifications to class schedules, and the reconfiguration of classroom setups to accommodate both in-person and virtual participation. The driving force behind adopting the hybrid learning model lies in addressing limitations on in-person attendance, creating a dynamic educational environment where students can engage through both face-to-face interactions and online learning experiences

Policies regarding the implementation of hybrid learning at UIN Sultan Thaha Saifuddin Jambi, UIN Raden Fatah Palembang, and UIN Raden Intan Lampung are outlined in the respective university's circular letter. These policies are based on the Circular Letter from the Minister of Religious Affairs No. B-2733.1/DJ.I/PP.00/.00.11/08/2021 dated 30th August 2021, providing guidelines for educational institutions under the Ministry of Religious Affairs, and the Circular Letter from the Directorate General of Islamic Education of the Ministry of Religious Affairs No. B-2721.1/DJ.I/PP.00.9/08/2021 dated 30th August 2021. The hybrid learning policies at each UIN are listed in Table 1.

Table 1. Hybrid Learning Policies at UIN Sultan Thaha Saifuddin Jambi, UIN Raden Fatah Palembang, and UIN Raden Intan Lampung

| No. | Policy Description | UIN Sultan Thaha Saifuddin | UIN Raden Fatah | UIN Raden Intan Lampung |
|---|---|---|---|---|
| 1 | Policy Basis | SE Rector No: 2191/2021 | SE Rector No: B.001/Un.09/R.KP.00/01/2022 | SE Rector No: B.1987/Un.16/R.KP.001/9/2021 |
| 2 | Hybrid Learning Target | 1st and 3rd-semester students | 2nd and 4th-semester students | 1st and 3rd-semester students |
| 3 | Lecture Model | Hybrid | Hybrid | Hybrid |
| 4 | Hybrid Classroom Capacity | 25% of classroom capacity | Maximum of 25 students | 35% or maximum of 15 students |
| 5 | Hybrid Learning Duration | 60 minutes | 60 minutes | 60 minutes |
| 6 | Hybrid Learning Frequency | 4 times per semester | 5 times per semester | 3 times per semester |

Based on Table 1 above, the implementation of hybrid learning at the Islamic HEI differs in their policies. Regarding the target students for LF2L, UIN Sultan Thaha Saifuddin Jambi and UIN Raden Intan Lampung conduct hybrid learning in the odd semester of the academic year 2021/2022 for 1st and 3rd-semester students. On the other hand, UIN RF Palembang implemented hybrid learning in the even semester of the academic year 2021/2022 for 2nd and 4th-semester students. The delay in UIN Raden Fattah Palembang's hybrid learning implementation was due to the Circular Letter issued by the Ministry of Religious Affairs on August 30, 2021, whereas the odd semester schedule for the academic year 2021/2022 at UIN Raden Fattah Palembang had already been prepared and ready for all students. The varied policies and timelines for implementing hybrid learning across Islamic Higher Education Institutions, as elucidated in Table 1, highlight the nuanced approaches taken by each institution. The distinctive scheduling decisions of UIN Sultan Thaha Saifuddin Jambi, UIN Raden Intan Lampung, and UIN RF Palembang, influenced by factors such as semester specifics and Ministry of Religious Affairs Circular Letters, underscore the diverse considerations shaping the integration of hybrid learning within the academic landscape.

When it comes to the frequency of hybrid learning, the three Islamic HEI in this study differs. UIN Sultan Thaha Saifuddin Jambi implemented hybrid learning to be conducted 4 times in one semester, while UIN Raden Fattah Palembang had 5 hybrid learning sessions in one semester. Both institutions implemented with a duration of 60 minutes and a combination of hybrid learning and online lectures. The online lectures in UIN Sultan Thaha Saifuddin Jambi and UIN Raden Fattah Palembang were designed in such a way that only students with the designated capacity attend hybrid learning, while other students did not participate in physical lectures but waited for their turn according to the established schedule. Consequently, in a semester with 14 meetings, each student may not attend 3-4 meetings. In contrast, at UIN Raden Intan Lampung, although the frequency of hybrid learning was only 3 times in one semester with a duration of 60 minutes, the lectures were designed with a hybrid learning model. In this case, hybrid learning was attended by students according to their designated capacity, while other students simultaneously participated in online lectures from their respective locations. This means that in a semester with 14 meetings, all students could attend every session.

**Learning Patterns during the Implementation of Hybrid Learning**

In general, hybrid learning at Islamic Higher Education Institutions incorporated a combination of online and offline formats, with a predominant reliance on online (daring) methods. Examining the policies outlined in Table 1 for each institution in this study, the average hybrid learning experience comprised 3-5 sessions per semester. Field data reveals a prevailing preference among lecturers for conducting online lectures, while a smaller proportion opts for either offline or online formats. Online instruction occurred through virtual meetings on platforms such as Zoom and Google Meet, complemented by assignments shared through WhatsApp groups. Additionally, the campus provided an online learning system to facilitate the management of virtual teaching. It is noteworthy that each university's approach to hybrid learning aimed to adapt to the digital learning ecosystem, marking a novel learning environment for both lecturers and students.

Based on the interview with the Program Study Chairpersons and College Leaders at the institutions, it was found that a greater number of hybrid learning were generally conducted by senior faculty members. This was attributed to their lesser familiarity with IT and their preference for traditional face-to-face teaching over online teaching. This is because hybrid learning is still a surprising concept for some faculty members who have not fully adapted to the wave of technological advancements. Some of them even face technical challenges in online teaching.

The hybrid learning model implemented in the institutions combined both online and offline teaching, but the instructional methods used varied. Observations indicated that the teaching methods used in both hybrid learning and online lectures generally varied, consisting of a combination of lecture, discussion, assignments, and other methods. Only a small number of faculty members used the lecture method, especially at UIN Raden Intan Lampung. This indicates that the learning atmosphere in the classrooms (both online and offline) tends to be diverse. In hybrid learning, the lecture method was still used by some faculty members. This method involved verbal delivery of the material by the lecturer to the students. However, most faculty members prefered to use other interactive methods that involve active student participation.The hybrid learning model, encompassing both online and offline teaching in the examined institutions, displayed a diverse array of instructional methods. Notably, observations revealed variations in teaching approaches, incorporating lectures, discussions, assignments, and other techniques, with a minimal reliance on traditional lecture methods, particularly notable at UIN Raden Intan Lampung. This diversity underscores the dynamic learning environment within classrooms, both online and offline, with hybrid learning reflecting a mix of lecture-based instruction and a predominant preference for interactive methods that actively engage students.

Generally, the learning atmosphere in hybrid learning classrooms, both online and offline, was dynamic and interactive. Faculty members acted as facilitators who encourage active student participation and facilitated discussions and collaborations among students. This reflects an effort to create a more engaging learning environment and actively involve students in the learning process. However, it should be noted that the variation in teaching methods in hybrid learning can also pose challenges. Students need to adapt to the different teaching methods used by faculty members, which may require different learning skills and approaches.

The aspect of student attendance in lectures is also a primary concern. The level of attendance and student participation in the class was evaluated, and the results indicate a relatively high level of attendance. Figure 4 illustrates the data depicting the attendance and participation rates of students during lectures. This data includes the percentage of student attendance in each lecture session, both in the traditional face-to-face format and online. High attendance rates indicate that students are actively present and engaged in the learning process within the class. Apart from attendance rates, student participation is also a focus of this

research. Student participation encompasses active engagement in discussions, answering questions, sharing opinions, and contributing to the learning activities. High levels of participation indicate that students are actively involved in the learning process and contribute to creating an interactive and collaborative learning environment. The evaluation of student attendance and participation, as depicted in Figure 4, reveals a notably high level of engagement in both traditional face-to-face and online lecture formats. The data indicates that students consistently attend lectures, demonstrating active presence and involvement in the learning process. Additionally, the emphasis on student participation, encompassing discussions, question-answering, and active contributions, further underscores the creation of an interactive and collaborative learning environment within the class.

**Learning Enrichment and Learning Resources**

A crucial factor in hybrid learning is the constrained timeframe for meetings. While face-to-face sessions are subject to time restrictions, online learning, despite having more sessions, encounters challenges like network issues and limited access to IT devices. Furthermore, due to the limited meeting duration, not all course materials can be comprehensively covered, leading instructors to prioritize essential topics. To address these challenges, instructors must exhibit creativity in managing the learning process. This involves offering motivational support to students and providing additional learning resources for enrichment, ensuring the achievement of learning objectives and the development of students' competencies.

The data indicates that not all lecturers provide learning enrichment and learning resources. Further investigation through interviews shows that the provision of enrichment materials depends on the characteristics of the course, including the depth and breadth of the content and the presence or absence of practical demands. Meanwhile, the creativity of students in seeking additional materials/enrichment resources is relatively high because only a small percentage of students felt satisfied with what the lecturers explained during class meetings, while the majority actively sought the supplementary materials/enrichment resources. The findings reveal a varied approach among lecturers in providing learning enrichment and resources, with a significant influence stemming from the specific characteristics of the course. Notably, the data suggests that while a portion of students express satisfaction with the provided materials during class meetings, a majority actively demonstrates high creativity in seeking additional enrichment resources to enhance their learning experience.

The data shows that the majority of students have more than five online learning resources. This indicates that students are actively seeking and utilizing various online learning sources to support their learning process. Based on the provided figure, the most common forms of online learning resources accessed by students are journals, books, and relevant YouTube content. Journals are essential learning sources in an academic context, as they provide the latest research and scholarly articles in various disciplines. Additionally, books are also widely accessed as online learning resources by students. Electronic books or e-books offer easy and quick access to a variety of learning materials. YouTube is also a popular online learning source among students. The platform offers various educational videos that can help students understand complex concepts through visualization and interactive explanations. Students can access tutorial videos, online lectures, or presentations that are relevant to the courses they are taking.

The data shows that the majority of students access their learning resources more than five times each month. Furthermore, many students access these learning resources more than ten times every month. This indicates that students are truly making extensive use of the available learning resources. Accessing the learning resources more than five times per month demonstrates the high commitment and motivation of students in deepening their understanding of the study materials. Students actively access these learning resources to acquire

additional information, prepare for assignments or exams, and enhance their comprehension of the concepts taught in their courses. The data underscores a robust pattern of student engagement, with a majority accessing learning resources more than five times monthly and a significant portion exceeding ten times. This frequent and extensive utilization indicates not only a high level of commitment but also a strong motivation among students to deepen their understanding, prepare for assessments, and augment their comprehension of course concepts through active and repeated engagement with the available learning materials.

The high frequency of access also reflects the availability and accessibility of adequate learning resources for students. Educational institutions that provide easy and extensive access to online learning resources, such as journals, books, and learning platforms, offer opportunities for students to maximize their learning potential. The data shows that some students have been using foreign language learning resources. Even though they are still in the lower semesters (1-4), they are already familiar with learning resources that are not in the Indonesian language. The utilization of foreign language learning resources by students can have several implications. Firstly, it indicates that students have access and ability to use learning resources in a foreign language. This may suggest that they have adequate language skills to comprehend and utilize those learning resources. Secondly, the use of foreign language learning resources by students also indicates that they have a high level of interest and motivation in acquiring knowledge from international sources.

**Learning Facilities and Platforms**

The provision of learning facility support is critically essential in the context of hybrid learning, where a combination of online and offline methods is employed. This necessity becomes even more pronounced due to the restricted frequency and duration of hybrid learning sessions. In particular, the success of online learning within this framework is contingent upon the availability of robust supporting facilities and a variety of learning platforms, both of which play pivotal roles in ensuring an effective and enriching learning experience.

Analysis of the data reveals that every student possesses IT devices to facilitate online learning, with laptops and mobile phones emerging as the predominant choices. This ubiquity of IT resources among students indicates a foundational readiness for digital engagement. Moreover, the figure below illustrates the diverse learning platforms employed by lecturers in their teaching endeavors, showcasing the adaptability and varied technological strategies embraced within the hybrid learning environment.

The learning platforms used by the majority of lecturers vary significantly, ranging from WhatsApp, Zoom, Google Meet, and other platforms. However, there is still a small group of lecturers who only use WhatsApp or the campus e-learning platform. Most students access the learning platform links using internet data quotas, which on average cost around Rp 100,000 per month, with relatively good network quality. Although there is assistance in the form of internet data quotas provided by the Government/Campus, this aid is not received every month and is not given to every student. The diverse array of learning platforms employed by the majority of lecturers, spanning WhatsApp, Zoom, Google Meet, and others, reflects the adaptability of hybrid learning. However, a notable group of lecturers relies solely on WhatsApp or the campus e-learning platform. Despite the majority of students accessing learning platform links with relatively affordable internet data quotas and decent network quality, the intermittent provision of government/campus assistance creates challenges, as it is not consistently available to every student on a monthly basis.

**Learning Outcomes**

Hybrid learning, which blends restricted offline sessions with online components, has been consistently employed in recent periods. Assessing the effectiveness of this approach

involves scrutinizing learning outcomes, a crucial metric in educational evaluation. The positive results of hybrid learning are discernible in the Grade Point Averages (GPAs) achieved by students in the three Islamic Higher Education Institutions examined in this study.

Examining the data presented in the figure above, it is evident that a substantial majority of students have attained a Grade Point (GP) above 3.00 on the 4-point scale, with a noteworthy proportion achieving scores above 3.50. Conversely, only a small fraction of students fall below the 3.00 GP threshold. These findings suggest that the implementation of hybrid learning has contributed positively to students' academic performance, as reflected in their overall GPAs.

Several State Islamic HEI are trying to adapt to the challenges of 21st century learning by implementing hybrid learning, including UIN Sultan Thaha Saifuddin Jambi, UIN Raden Fatah Palembang, and UIN Raden Intan Lampung. The implementation of hybrid learning at these three universities is adjusted to the level of readiness of each institution. The policies implemented by the three universities demonstrate careful decision-making in challenging situations while gradually easing restrictions to allow hybrid learning. Hybrid learning in higher education requires a carefully designed approach to ensure the psychological well-being of lecturers and students (Carrruana Martín et al., 2022). This approach involves scheduling arrangements, class capacity, and learning models. Psychological well-being is positively correlated with endurance, a deep learning approach, and organized effort (González-Víllora et al., 2019). It is important to consider students' psychological well-being during hybrid learning, because changes in interaction patterns from face-to-face to online learning can affect their well-being (Raes et al., 2020). State Islamic Higher Education Institutions, exemplified by UIN Sultan Thaha Saifuddin Jambi, UIN Raden Fatah Palembang, and UIN Raden Intan Lampung, are actively navigating the challenges of 21st-century learning through the implementation of hybrid learning. The carefully tailored policies and gradual easing of restrictions at these institutions underscore the thoughtful decision-making in adapting to the evolving educational landscape. As hybrid learning becomes more prevalent in higher education, it is imperative to prioritize the psychological well-being of both lecturers and students, considering factors such as scheduling, class capacity, and learning models. Acknowledging the positive correlation between psychological well-being, endurance, deep learning approaches, and organized effort is crucial in fostering a successful and sustainable hybrid learning environment, especially considering the shifts in interaction patterns from face-to-face to online learning that may impact students' well-being.

The implementation of hybrid learning was based on the policies set by each university, which became the basis for faculty members to carry out hybrid learning. The initial adjustment related to hybrid learning implementation was made in the technical aspects of teaching through hybrid methods and adjustment of essential materials. This was done by faculty members even though the universities themselves did not redesign the curriculum. During the hybrid learning implementation, the university leadership coordinated with the LPM (Lembaga Penjamin Mutu/ Quality Assurance Agency) to monitor and evaluate the process. This was done to collect data related to hybrid learning implementation. The results of the monitoring and evaluation were then analyzed to determine policies and follow-up plans. The successful implementation of hybrid learning was guided by the specific policies set by each university, providing the framework for faculty members to adopt and integrate hybrid methods into their teaching practices. Despite initial adjustments in technical aspects and essential materials without a comprehensive curriculum redesign, faculty members took proactive measures. Notably, university leadership collaborated with the Quality Assurance Agency (LPM) during the hybrid learning phase, conducting ongoing monitoring and evaluation. The gathered data informed subsequent policies and follow-up plans, ensuring a systematic approach to the evolving landscape of hybrid education.

In the implementation of hybrid learning, the three universities applied a combination of online and offline learning, with a higher frequency of online learning. However, upon closer examination, there were differences in the models applied. UIN Jambi and UIN Palembang conducted hybrid learning using a synchronous learning arrangement in a synchronous physical format, where learning activities between students and lecturers occurred at the same time and place. Meanwhile, UIN Lampung organized hybrid learning using a synchronous learning arrangement in a synchronous physical format and virtual synchronous format, where some students attended offline lectures while others attended online lectures simultaneously. The implementation of synchronous physical format and the combination of synchronous physical format with virtual synchronous format had different consequences.

The hybrid learning initiatives at the three universities integrated a mix of online and offline methods, with a predominant emphasis on online learning. However, upon closer scrutiny, variations emerged in the applied models. UIN Jambi and UIN Palembang adopted a synchronous learning arrangement in a synchronous physical format, with learning activities conducted simultaneously in the same physical location. In contrast, UIN Lampung employed a hybrid approach, combining synchronous physical format with virtual synchronous format, facilitating simultaneous attendance for some students in offline lectures and others in online sessions. The diverse implementations of synchronous formats had distinct consequences, showcasing the adaptability and nuanced approaches within the realm of hybrid learning.

In the first model, hybrid learning was attended only by scheduled students, while others did not participate in the lectures. In contrast, in the second model, while some students attended hybrid learning according to their schedule, other students could still participate in online lectures from their respective locations. As a result, in the first model, students who did not attend hybrid learning according to their schedule tended to experience more learning loss (missing course material due to non-attendance) compared to the second model, where the potential for learning loss was smaller. However, it is a fact that hybrid learning will still lead to learning loss. Not only due to the limited frequency of offline lectures but also because of the short duration of meetings and the predominance of online learning with various challenges. Such conditions require each faculty member to creatively address the potential learning loss.

The two models of hybrid learning, differing in student attendance requirements, yielded varying outcomes in terms of learning loss. The first model, limited to scheduled students, saw a higher likelihood of learning loss for those who did not attend according to their schedule. Conversely, the second model allowed for greater flexibility, enabling some students to participate in online lectures from their locations. Despite these distinctions, the inevitability of learning loss in hybrid learning persists, stemming from factors such as limited offline lecture frequency, short meeting durations, and the prevalence of online learning challenges. Acknowledging this reality, faculty members are compelled to employ creative strategies to address and mitigate the potential learning loss.

This study reveals that a strategic approach is crucial in mitigating learning loss in Indonesian Islamic HEI. One of the main findings is the importance of utilizing technology for effective online learning. Institutions that can adapt quickly and provide comprehensive online learning platforms and resources show better results in reducing learning loss (Ndekwa, 2021; Yusuf, 2020). Integrating enhanced technology-based learning methods, such as interactive online platforms, multimedia resources, and virtual laboratories, has proven to be effective in engaging students and facilitating meaningful learning experiences (Gamage et al., 2021; Yu et al., 2021). However, the main problem related to the integration of technology into hybrid learning is the competence of the lecturers. In fact, many lecturers who are not proficient in technology experience hesitation in implementing hybrid learning. This has an impact on the limited ability of lecturers to explore and utilize various digital platforms to support learning.

Consequently, it also hampers the creativity of lecturers in applying varied technology-based teaching methods. Therefore, the essential and crucial aspect to consider in the implementation of technology-based learning, is the competence of lecturers as the "locus" of learning. No matter how many technologies are available to facilitate technology-based learning, they will not be functional if lecturers lack the knowledge and skills to use them. Universities should provide support for lecturers to attend technology-oriented training sessions.

This study underscores the pivotal role of a strategic approach, particularly emphasizing the critical importance of technology integration, in mitigating learning loss within Indonesian Islamic Higher Education Institutions. Institutions that swiftly adapt and offer comprehensive online learning platforms demonstrate superior outcomes in reducing learning loss. While advanced technology-based learning methods have proven effective in engaging students, the proficiency of lecturers remains a key challenge. Many educators' hesitancy and limited competence in utilizing digital platforms hinder the exploration of varied technology-based teaching methods, highlighting the essential need for continuous training and support for lecturers to enhance their technological competence and optimize the implementation of technology-based learning.

Such learning environments require radical changes in lecturers' pedagogical methods in order to accommodate new technologies. Although technology is a physical tool and not a theoretical thinking tool or concept, it not only changes the way we carry out a task, but also the way we think about the task. Synchronous hybrid learning environments are a new type of setting that greatly impacts pedagogy and instructional design and thus require other teaching methods and different enabling learning activities. This means that lecturers must adapt their teaching approaches, but at the same time must maintain comparable learning standards. In addition, because the quality of teaching partly depends on the lecturer's competence in using technology. Therefore, lecturers need to actively learn how to work with technology and should get opportunities to try things and evaluate results based on evidence. Another challenge is that hybrid synchronous learning environments require more coordination from lecturers. During teaching in this new learning atmosphere, lecturers need to pay attention to both locations and also need to carry out certain operational actions on the teaching and learning platform. Thus, the lecturers have a heavy mental load, which is referred to as hyper-zoom or hyper-focus.

The advent of synchronous hybrid learning environments necessitates a transformative shift in lecturers' pedagogical methods, demanding adaptability to new technologies while maintaining consistent learning standards. Recognizing that technology not only alters task execution but also influences conceptual thinking, lecturers must actively engage in learning how to effectively integrate technology into teaching methods. This process involves continuous learning, experimentation, and evidence-based evaluation. Moreover, the coordination demands of hybrid synchronous learning environments add to the challenges faced by lecturers, requiring meticulous attention to multiple locations and operational actions on teaching platforms, leading to a notable mental burden known as hyper-zoom or hyper-focus.

When looking at students' perspectives in this new learning environment, research comparing student experiences learning offline and online, found that these two groups experienced learning differently in hybrid synchronous situations. Therefore, it is important to consider this when preparing for learning experiences. What drives the synchronous hybrid learning approach is the desire to ensure all students receive comparable learning experiences regardless of location. But the challenge lies in designing and implementing pedagogical strategies and technological systems that enable comparable learning experiences, also referred to as co-presence. For example, it is important for teachers not to focus solely on students who are far away and adopt a slower pace with lots of repetition, as these kinds of strategies can harm students' face-to-face classroom experience.

When examining students' perspectives in the context of hybrid synchronous learning, research highlights distinct experiences for those learning offline and online. This underscores the importance of carefully considering these differences in preparation for learning experiences. The core aim of the synchronous hybrid learning approach is to ensure uniform learning experiences for all students, irrespective of their location. However, the challenge lies in crafting and implementing pedagogical strategies and technological systems that facilitate co-presence and foster comparable learning experiences. Avoiding strategies that solely cater to distant students, such as adopting a slower pace with excessive repetition, becomes crucial to prevent potential harm to the face-to-face classroom experience for all students.

When implementing synchronous hybrid learning, it becomes increasingly difficult to activate and engage students at the same level as students learning face-to-face. This explains the need to overcome the perceived distance between students living in remote areas and their face-to-face students and classmates by building some kind of connectedness. Lastly, hybrid synchronous learning environments demand more self-discipline for students who are learning or online. Because teachers are not physically present, control over student engagement is reduced. The implementation of synchronous hybrid learning poses challenges in activating and engaging remote students at a level equivalent to those learning face-to-face. Addressing the perceived distance between these groups necessitates the establishment of connectedness. Additionally, hybrid synchronous learning environments require heightened self-discipline from online learners due to the reduced physical presence of teachers, leading to a decrease in direct control over student engagement.

Another significant finding is the need for pedagogical transformation in the landscape of higher education. This aligns with several studies related to the reorientation of higher education, which indicate a shift towards student-centered and active learning approaches that can help reduce learning loss. Lecturers need to adopt strategies such as problem-based learning, collaborative projects, and flipped classrooms (Kurniawan et al., 2020). This approach fosters student engagement, critical thinking, and problem-solving skills, thereby balancing the limitations of online learning. In this research, it is also important to highlight a comprehensive support system for students to mitigate learning loss. Findings indicate that students have not been receiving adequate academic and emotional support from institutions, such as counseling services, peer mentoring, and online guidance. This can impact students' motivation during online learning. It is known that students often experience anxiety during online learning due to network constraints, lack of social interaction, unclear materials, among others. Thus, these support mechanisms help address the psychological challenges students face during the pandemic and create a conducive environment for effective learning (Silva et al., 2021).

Collaboration and sharing best practices among higher education institutions are also considered crucial factors in reducing learning loss. Institutions actively engaged in partnerships, consortia, and networks are better prepared to face challenges and exchange best practices (Hevia et al., 2022). Collaboration facilitates the sharing of resources, faculty development programs, and joint research initiatives, which ultimately benefit students and enhance the overall quality of education (Hevia et al., 2022). In line with these efforts, continuous assessment and feedback mechanisms are also crucial. This serves as a critical evaluation of policies or program implementations that are often not followed up on. Institutions that implement regular formative assessments, quizzes, and feedback loops to monitor student progress can identify areas of learning loss and provide timely interventions (Simal et al., 2022). Continuous assessment helps educators adjust their instructional strategies and provide targeted support to meet learning needs (Simal et al., 2022).

One way to answer the challenges of collaborative hybrid learning is that we can implement online collaborative learning theory (OCLT) (Harasim, 2017). Online Collaborative

Learning (OCL) is a theory by Linda Harasim that emphasizes the importance of collaboration in online learning. It emphasizes the role of technology, particularly online platforms, in supporting student collaboration. The theory emphasizes the importance of shared knowledge construction, which allows students to understand concepts in depth, compare perspectives, and develop joint solutions. The process of discussion and collaboration is prioritized over the final result, with reflection being an essential part of the learning experience. The instructor's role is crucial, acting as a facilitator, providing materials, resources, and support. The OCL approach also emphasizes collaborative assessment, assessing students based on their contributions to discussions and projects.

Furthermore, universities need to redesign their curriculum to accommodate the post-pandemic learning landscape. Institutions need to review their curriculum and make necessary adjustments to integrate digital literacy, remote collaboration skills, and adaptability into their courses to be better positioned in reducing learning loss (Bailey et al., 2021; Munawar et al., 2021). Curriculum redesign allows students to develop relevant skills in the digital era and ensures that learning outcomes are aligned with the ever-evolving demands of the job market (Munawar et al., 2021). Universities must undertake a comprehensive curriculum redesign to align with the post-pandemic learning landscape. This involves reviewing and adjusting curricula to incorporate essential elements such as digital literacy, remote collaboration skills, and adaptability. Such strategic changes are crucial for reducing learning loss and equipping students with skills that are pertinent to the digital era, ensuring that learning outcomes align with the dynamic demands of the contemporary job market.

Finally, institutional leadership plays a crucial role as the main anchor in mitigating learning loss. Institutions that demonstrate strong leadership, effective communication, and a proactive approach in implementing strategic measures are better equipped to face the challenges of the pandemic. (Abdurrahmansyah & Rismawati, 2022). Supportive leadership and clear communication channels foster resilience and adaptability among students and faculty, leading to better learning outcomes (Abdurrahmansyah & Rismawati, 2022).

## CONCLUSION

This case study delved into the strategic implementation of hybrid learning amidst digital disruption to address learning loss within Islamic Higher Education Institutions (HEI). Findings indicate a positive impact on mitigating learning loss, as the hybrid model, combining face-to-face and online methods, offers flexibility and broader access for students while preserving essential social interaction and collaboration. Despite its advantages, challenges such as technical issues, the digital divide among students, and the need for additional technology training for lecturers were identified. Therefore, to fully optimize the benefits of hybrid learning in Islamic HEI, there is a crucial requirement for adequate infrastructure, training, and resource support. In conclusion, hybrid learning in Islamic HEI presents substantial opportunities to alleviate learning loss and enhance education quality. With a suitable approach and robust support, including collaboration in the digital learning environment, this model emerges as an innovative solution to educational challenges in today's digital era.

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