Hybrid Learning Implementation in Higher Education During The Covid-19 Pandemic in Indonesia: An Overview

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Abstract

The present research aims at portraying the implementation of hybrid learning at a higher education level. The subjects involved in this research were four students of a history education study program, five lecturers, and three policymakers of one private college in Lubuklinggau, South Sumatera, Indonesia. The data was collected using observations, in-depth interviews, and document analysis. First, the result revealed that: 1) The hybrid learning is delivered synchronously and asynchronously; 2) The online sessions are organized longer than the offline sessions; 3) The platform used is mobile-based, consisting of the LMS owned by the college and completed by other educational and social networking sites (ESNS); 4) Learning activities are variously arranged to keep the students' engagement; 5) The assessment is administered via portfolio, project assignment, quiz, and discussion. Second, the factors to successfully execute hybrid learning include learning policy and design; institution readiness and supporting facilities; lecturers' readiness; and students' learning preferences and motivation. In sum, mobile-based hybrid learning is perceived as the best solution to accommodate students' learning needs during the pandemic. More investigation into the online delivery mode and other factors (from different frameworks) influencing its implementation is strongly suggested.

Keywords: Hybrid Learning; Implementation; Mobile-based Learning; Determining Factors

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Introduction

The emergence of the Covid-19 pandemic has led the world to a rapid change in all aspects, including education. There is a shift in learning from face-to-face to remote learning. Together with this phenomenon, educational technology (EdTech) and learning innovations are growing during this period (UNICEF, 2020). The current phenomenon also enhances educators' technological competence (Zalat, Hamed, & Bolbol, 2021). Comfort in learning is also promoted during learning at a distance(Mukhtar, Javed, Arooj, & Sethi, 2020). Engagement in the classroom has also proven to change in this era (Oyedotun, 2020).

However, as this is too sudden and leads to a transition period, some problems may arise during the implementation of remote learning. In Indonesia, this model of learning has given students, teachers, and parents an abstruse situation (Sikirit, 2020). For students, the issue of internet connection or bandwidth is the main technical problem they face frequently. A survey by Pradana and Syarifuddin (2021) shows that 70% of respondents keep complaining about internet connectivity. Then, online learning tests them on how well they understand the materials, whereas lecturing and discussing online do not always meet their needs and pique their curiosity (Yuzulia, 2021). Additionally, fully online learning does not fully accommodate interactivity among learners and their teachers (UNICEF, 2020). Moreover, not all students have the proper devices to access full online learning, such as laptops. This fact has also been underlined in the study of Efriana (2021).

Educators face a variety of challenges as well. During remote learning, problems such as low student participation and difficulty assessing their grasp of learning materials have arisen (Kamal & Illiyan, 2021). Moreover, distance learning teachers have several challenges, including ineffective material delivery and feedback (Rahayu & Wirza, 2020). Less conversational and engaging learning environments might be detrimental to online teaching (Rosalina, Nasrullah, & Elyani, 2020). Furthermore, engagement issues have remained unresolved. Hollister, Chukoskie & Rae (2022) found that 72 percent of students experienced a decline in engagement during remote learning. These listed issues then evolve into determining factors for fully online learning in an Indonesian context. Focusing on some problems during a change in the implementation of hybrid or blended learning methods with mobile-based applications could be taken into consideration by educators, including at a higher education level. These models are recommended during the pandemic situation in balancing the gap between full remote and traditional face-to-face learning. Blended or hybrid learning is also used in the development of learning scenarios that invoke online and offline separations in which learning takes place (either online or offline) (Raes, 2022). Those imply that hybrid learning occurs when traditional face-to-face and virtual learning technologies and pedagogies are combined.

In general, blended learning is a more effective learning method than traditional learning (Hafeez & Akhter, 2021). The study conducted by Nashir & Laili (2021) noticed that this model of learning is effective for students as they can intensify their learning outcomes. Similar findings are also reported by Hanik, Afriyanti, Ruchyyah, Afiyah, & Robi'attuladawiyah (2021). They highlighted that hybrid learning using specific learning phases has assisted students with the enhancement of learning results. Hybrid learning is also claimed to give students vaster insight and provide opportunities for teachers to infuse more educational platforms into their classes (Ramli, Setyawan, Ridwan, De Vega, & Ulfaika, 2022). In addition to the above-mentioned findings, hybrid learning is also found to improve students' understanding of learning subjects (Resmiaty, Chaeruman, & Kusumawardani, 2021). According to Singh, Steele, & Singh (2021), hybrid learning is a solution for providing students with alluring and eloquent learning experiences. Moreover, the issue of bandwidth and the proper devices can be tackled by this model.

The study by Nashir & Laili (2021) has already portrayed the students' and teachers' voices on hybrid learning implementation, while the research of Hanik et al. (2021) focuses on the procedural steps of hybrid learning. The studies of Ramli et al., (2022), Resmiaty et al., (2021) Singh et al. (2021) concern the benefits of hybrid learning to students. However, there is an urgency to investigate a detailed description of how hybrid learning is organized and what factors determine its successful implementation.

On that ground, the present research attempts: 1) how the model of hybrid learning is

planned and implemented; and 2) what factors determine successful hybrid learning.

Methodology

The present research used a qualitative approach with a case study method. This method was chosen due to its natural setting in portraying the phenomenon being studied.

The subjects involved in the research comprised 4 students, 5 lecturers, and 3 policymakers from a private college in Lubuklinggau, South Sumatera, Indonesia. This campus was chosen as they have been applying hybrid lessons since the pandemic wave came. The subjects are chosen using a purposive sampling technique by Creswell's suggestion (2012). The data was collected using a variety of methods, including observations, interviews, and document analysis.

Observations

The observations were conducted during the hybrid learning sessions for one semester, with 7 offline sessions and 7 online sessions. The foci of the observations are the detailed implementation of the hybrid learning model seen from the planning, implementation, and evaluation.

Interviews

The interviews were administered to four student representatives, five lecturers, and three policymakers. The interviews were conducted at the end of the learning sessions. For the representatives of the students, the focus of the interview is to find out how they perceive hybrid learning in their class. For the lecturers, the interview focused on how they prepared to work with hybrid learning. For the policymakers, the interview session was used to explore how they designed the hybrid learning program and the objectives. In the end, the interviews are coded into the factors of hybrid learning implementation.

Document analysis

Document analysis were utilized to support the observation data on the implementation of hybrid learning. Two documents were taken as the sources: lesson plans and the syllabus that were used by the lecturers. The data set obtained was then examined using Miles, Huberman, & Saldana's (2014) data reduction, data visualization, and data verification. In the reduction process, the researchers sort the required data by focusing on the information that supports the research's foci, searching for the themes and patterns. By applying this step, the researchers got a clearer description before conducting data visualization or presentation. When presenting the sorted data, the data was explained in narration and figures. The last part of data analysis is verifying the data and justifying the results with the previous relevant research. Triangulation was also applied to Creswell's theory (2012). Methods and source triangulation were employed in the research.

Results

The researchers collected significant information from the observation and document analysis, which is summarized in Table 1.

Table 1. The learning phase in a hybrid setting c

Elements	Planning	Implementation
Delivery mode	Offline: 7 meetings Online: 7 meetings	Offline: 7 meetings Online: 7 meetings(synchronous and asynchronous)
Learning duration	Online: as scheduled Offline: 1 hour 40 minutes (without break)	Online: full as scheduled Offline: 1 hour 40 minutes without break
Platforms used	LMS is owned by the campus Educational and social media	LMS is owned by the campus Educational and Social Networking Sites (ESNS)like Zoom/ google meet, Whatsapp, and Facebook Live Streaming

Elements	Planning	Implementation
		All platforms are dominantly accessed via mobile learning applications
Learning activities	Steps of Seeking information, Acquisition of information, Synthesizing of knowledge	Presentation Discussion Collaborative working Project-based activities Debating Interview
Assessment	Oral and written assessment	Portofolio, Online discussion, Quizzes

Table 1 indicates how the hybrid learning sessions are planned and implemented. There are five elements highlighted: delivery mode, learning duration, the platform used, learning activities, and assessment. The learning sessions are implemented according to the delivery mode and learning duration. Offline and online sessions are realized in 7 meetings for each with the designed duration. The sessions are delivered either synchronously or asynchronously.

For the platforms used, the lecturers provide general guidelines by mentioning LMS, owned by the campus, and educational and social media as well. In the implementation, the lecturers choose a variety of learning platforms to accommodate the students' learning needs and familiarity with the platforms. Students dominantly used mobile applications to access the platforms. A similar case happens to learning activities. In the plan, the lecturers list general steps of learning activities. In the implementation, various learning activities are also chosen to provide students with interesting and engaging activities during their learning. Finally, oral and written assessments are planned by the lecturers to evaluate the learning. In its execution, the assessments are realized by giving portfolios, online discussions, and quizzes. In addition to the above data, the researchers also conducted in-depth interviews with three parties (policymakers, lecturers, and a representative of students). The information obtained is summed up from the interviews in Table 2.

Table 2. Factors to succeed the hybrid learning

Interview excerpt	Participant	Factor
"We apply hybrid learning based on our policy, which was issued to make sure that the teaching and learning processes are well controlled. The lecturers and their students will be accommodated by both online and offline learning."	Policy maker 1	Learning policy and design
"The design of hybrid learning we have chosen enables us to monitor the learning process. This is also to ensure the quality of learning, especially during this pandemic."	Policy maker 2	
"This hybrid learning allows us to improve students' learning outcomes during the pandemic, particularly to overcome the problem of internet connection reach."	Policy maker 3	
"Our campus has provided sufficient facilities for hybrid learning, both in software and hardware." However, as most students use mobile phones for online learning, bandwidth frequently becomes an obstacle while learning. But we manage this because the students may get the learning reviewed when they come to offline sessions, including the materials."	Policymakers	Institution readiness and supporting facilities

Interview excerpt	Participant	Factor
"The campus has provided the ICT facility. So, we, as the lecturers get accommodated."	Lecturers	
"We need a good and representative place to learn so we can concentrate on our learning even though it is online."	Students	
"After hybrid learning started to be implemented, the lecturers were encouraged to develop and innovate their learning methods, techniques, and materials." This is the positive side of learning in a hybrid setting. " "There is almost no problem except the internet connection sometimes." I get assistance from my colleagues. "	Lecturers	Lecturers' readiness
"We are pleased because hybrid learning allows for flexible learning." It encourages students to seek out additional learning resources on their own. And also familiarize the use of mobile phones for learning, not playing games. "	Student 1	Students' preference and learning motivation
"We like learning from home using mobile phones, and also learning in classrooms, so we don't feel bored."	Student 2	
"We like learning in classrooms, although the time is limited." We also like to learn by watching YouTube. "	Student 3	
"Compared to face-to-face learning, I feel that online learning does not give the maximum result. But by using hybrid learning, with the use of Whatsapp and Zoom, I feel more assisted in getting good grades. "	Student 4	

According to the interview data, four factors are claimed to aid in the successful implementation of hybrid learning at the research site. The first factor identified is the hybrid learning policy released by the campus, which is mentioned by the policymakers to monitor and serve the faculty and students' needs. The second factor is the learning environment and supporting facilities of the campus. It is mentioned that the campus is already equipped with sufficient facilities to implement hybrid learning. The third factor is the lecturers' readiness and competence. Once the policy is released, the lecturers are required to prepare themselves in terms of pedagogical and technological competence. The last factor is students' preference and learning motivation. They mention that they fancy hybrid learning as the model offers flexibility, independent learning, and mobile application use.

Discussion

The findings correspond to the research results of observations, interviews, and document analysis. The discussion is presented in the following sections.

The implementation of hybrid learning

As presented in the findings section, there are five things to highlight in the implementation of hybrid learning in the research site: delivery mode, learning duration, platforms used, learning activities, and assessment.

Delivery mode

In terms of delivery modes, the lesson plan for document analysis does not explicitly mention

the types of mode. It is only stated online and offline, 7 for each. This means that lecturers have a lot of freedom in terms of delivery mode. Based on the observations, teaching and learning processes are conducted synchronously and asynchronously. The proportion of synchronous and asynchronous is not mentioned clearly. The lecturers can freely choose between the two based on the class situation and needs. The World Bank has provided possible degrees of hybrid learning conducted in some countries (Barron, Cobo, Ciarrusta, Munoz-Nazar, 2021). Compared to the degrees, the delivery mode found in this study case is categorized into synchronous and asynchronous, hybrid, and bi-directional. This degree is also found in other countries like Cameroon.

Learning duration

In learning time duration, the planning and implementation display a different time learning allocation in offline and online sessions. The online sessions are arranged full-time (based on the number of credit hours). While the offline sessions are organized only for an hour and forty minutes, which is much shorter than the time allotted in usual offline sessions. The time reduction is due to the guidelines for organizing school activities during the pandemic issued by The Ministry of Education and Culture (2020). Traditional educational practices have been significantly disrupted as a result of social distancing and restrictive movement policies (Pokhrel & Chhetri, 2021).

Platforms used

In respect of the learning platforms used, the syllabus and lesson plans do not specifically suggest what platforms to use by the lecturers. This means that the lecturers may use platforms based on their preferences. However, using the LMS owned by the college is mandatory. In the implementation, aside from the LMS, the lecturers were observed to use a variety of learning platforms. The platforms range from educational ones like Google Meet and Zoom to social media platforms like Whatsapp and Facebook. The selection of learning platforms is observed to meet the students' needs for learning. Moreover, students' familiarity with applications is also taken into account. Most of the students reported using mobile phones for learning during online sessions. This is the main reason the college intends to apply mobile-based hybrid learning. This situation does not only occur in Indonesia. In other countries like India, the majority of students also prefer to use smartphones for distance learning (Muthuprasad, Aiswarya, Aditya, & Jha, 2021).

Learning activities

In the planning, the learning activities are prepared in general steps. The steps consist of seeking information, acquiring information, and synthesizing knowledge. In the implementation, the lecturers are observed to apply various learning activities both in an online and offline setting. The variety of activities such as presenting and discussing the materials, projecting tasks, debating, and interview simulations are arranged by the lecturers. The researchers see that the selection of learning activities is made to keep the students' learning participation Their engagement should also be preserved. Learning interactivity is also accounted for to maintain communication between the lecturers and the students. The utmost important thing is to keep the learners' understanding of materials as the top priority of hybrid learning applied by the college (see the interview summary). Learning participation (Kamal & Illiyan, 2021), engagement (Hollister et al., 2022), interactivity (Rosalina et al., 2020), and learning loss (Engzell, Frey, & Verhagen, 2021) need specific concern for the success of hybrid learning implementation.

Assessment

The assessment is planned for oral and written assessment. In the implementation, the assessment is realized by giving portfolios, online discussions, and quizzes. These types of assessments are given either synchronously or asynchronously. This finding aligns with the research reported by Khan & Jawaid (2020) that suggests portfolios can be a type of asynchronous assessment in Technology Enhanced Assessment (TEA), while multiple-choice assessments can be given synchronously. Some students may see online assessment as a flexible option, but others think that online assessment requires a lot of effort (Slack & Priestley, 2022). Further, the way students see this online assessment depends on gender, academic level, and socioeconomic status (Kundu & Bej, 2021).

Factors determining the success of hybrid learning

The result of the interview with the policymakers implies that the learning policy released and the learning design chosen have contributed to the successful implementation of hybrid learning. The learning policy will surely be issued as a legal basis to start the implementation. Moreover, this type of policy will assist the college in evaluating the implementation at the end of the program, and whether or not it has attained the policy objectives. Then, the college decides to choose and adopt a hybrid learning model as they see that this model offers several benefits to them. They see that this model will enable the college to control or monitor the teaching and learning processes. Additionally, this model is also expected to improve students' learning quality and outcomes during the pandemic. During full online learning in this pandemic, it is a common phenomenon that students' learning quality and outcomes are decreasing (Azevedo, Hasan, Goldemberg, Iqbal, & Geven, 2020; Hammerstein, König, Dreisörner, & Frey, 2021; Rahman, 2021). Internet connection is a frequent obstacle found in Indonesia (Pradana & Syarifuddin, 2021). That is why the combination with F2F learning is decisive to implement.

The findings of the present research correspond to the implication proposed by Al-Ayed & Al-Tit (2021). To achieve a fruitful result from hybrid learning, policymakers are indeed required to concentrate on the most significant objective. In this case, policymakers place a premium on learning control as well as on students' learning quality and outcomes. Such selection will further be a consideration for the curriculum developer to design beneficial learning hybridization (Apandi & Raman, 2020).

Institution readiness and supporting facilities

The second factor contributing to the success of the implementation of hybrid learning in the college is institutional readiness and supporting facilities. When issuing the policy on hybrid learning, the college has equipped itself with sufficient facilities so that the lecturers and students are accommodated properly. Readiness, including facilities, has influenced the intention of applying hybrid learning fields (Antwi-Boampong, 2022). In particular, for the lecturers, the presence of adequate facilities is expected to be an encouragement to intensify their duties as educators by utilizing EdTech. In the end, students' learning outcomes are expected to improve. Moreover, the intensification of learning facilities will direct educators to execute beneficial hybrid learning fields (Cabauatan, Uy, Manalo, & Castro, 2021). For the students, the institution's readiness and its facilities accommodate their needs for hybrid learning. It is mentioned that they need representative places to concentrate on their learning. Such facilities must meet their expectations for the types of learning they desire. It is further mentioned that sufficient facilities positively influenced students' behavioral intention to accept blended learning (Rudhumbu, 2022). More significantly, design facilities in hybrid learning have been predicted to increase students' contentment in learning (Kintu, Zhu, & Kagambe, 2017).

Lecturers' readiness

The third factor to give a contribution to the eminent hybrid learning application is the lecturers' readiness. First, the lecturers' readiness includes pedagogical competence, such as the ability to use and develop learning methods, techniques, and materials as mentioned by the informants. The factor of educators' readiness to apply hybrid learning is recognized to advance hybrid learning implementation, particularly in pedagogical insight for designing effective instructions (Dewi, Ciptayani, Surjono, & Priyanto, 2018). To be more specific, the factors influencing the successful implementation are pedagogical competence, effective communication, and course materials (Minhas, White, Daleure, Solovieva, & Hanfy, 2021).

The second is the lecturers' technological competence. The informant's highlight that they almost had no problems during the implementation. This implies that they have been familiar with the EdTech they adopt in their classrooms. The statement also indicates that they can design the course in a hybrid setting. As reported by Minhas et al. (2021), educators' ability to utilize EdTech to set up learning and plan courses is a key factor to successful learning. It is strongly advised to hire well-trained educators with digital platform knowledge and experience (Carmona & Irgang, 2020). All in all, when hybrid learning is positively accepted by in-service educators (Saboowala & Mishra, 2021), successful implementation is on its way.

Students' preferences and learning motivation

The fourth factor to support the successful application of hybrid learning is students' preference and motivation toward hybrid learning itself. The interviewees expressed that they chose hybrid learning for the following reasons. When preferring online sessions, flexibility, independent learning, and familiarity with mobile users are the students' catalysts. Flexibility and independent learning are regarded as giving them more freedom. No wonder, flexibility in both time and place (Dhawan, 2020) and independent or personalized learning (Bekmanova, Ongarbayev, Somzhurek, & Mukatayev, 2021) are the promises of distance learning. Familiarity with technology in mobile applications, as a part of students' technological competence, shall surely have an impact on this preference. As highlighted by Dinh, Dao, Quach, & Ha (2021), students' interest in engaging in remote learning is determined by their ability to use EdTech.

The students, at the same time, also like face-to-face learning due to their boredom with staying at home. By coming to offline classrooms, the students get motivated as they will be interacting with their peers and teachers. Furthermore, the students can also review their learning, especially for the materials they have not mastered, as mentioned by one of the policymakers. In the end, as claimed by the student informant, hybrid learning helps the student gain good grades. These types of needs, which are classified into facilitating conditions, affect students' motivation to engage through hybrid learning (Azizi, Roozbahani, & Khatony, 2020). This finding generally corresponds to a previous study conducted by Alfiras, Nagi, Bojiah, & Sherwani (2021), which underlines that students' awareness of adopting hybrid classes plays a pivotal role in succeeding hybrid models. Students whose motivation to learn is high will also prefer to learn in a hybrid delivery (Keskin & Yurdugül, 2020).

Conclusion

Hybrid learning is believed to be a significant solution that bridges the needs of remote learning and face-to-face learning. The present research has indicated that hybrid learning models can be implemented to meet the learning demand, specifically during the COVID-19 pandemic. Successful implementation takes place by planning a careful learning design, providing adequate facilities, developing and strengthening lecturers' pedagogical and technological competence, and fostering students' learning preferences and motivation. Finally, the present research highly recommends the investigation of delivery mode proportion (synchronous and asynchronous) which suits best in the Indonesian context. More determining factors, packed in a particular framework such as OBSTRA (Online and Blended Teaching Readiness Assessment) for successful execution of hybrid learning, are worth researching.

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