<div style="background:#b33;color:white;">**Original Research Paper**</div>

Recommendations for blended learning implementation COVID-19 pandemic atmosphere at Indonesian University

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Abstract

Kampus Merdeka, launched by the Ministry of Education and Culture, calls for increased use of technology in the learning process at the university, followed up by the policies of several universities in Indonesia to implement the Blended Learning method. Several universities in Indonesia started to implement the strategy, but in reality, the implementation was inseparable from the unpreparedness faced by the academic community in its application. The outbreak of COVID-19 further exacerbates this unpreparedness. Thus, this research aims to measure the level of readiness for Blended Learning implementation and provide several recommendations on how people cope with this situation. This research used the ELR (E-Learning Readiness) Model to measure readiness in applying Blended Learning methods. The E-Learning Readiness model used in this study was the Aydin & Tasci E-Learning Readiness model. The overall readiness level for Blended Learning implementation is 3.58. This result shows that the level of readiness is at the ready stage and needs a slight increase. This result suggests several recommendations for Blended Learning implementation, especially in this COVID-19 atmosphere.

Keywords: blended learning; COVID-19; e-learning; Kampus Merdeka

1. Introduction

Currently, the implementation of teaching and learning activities is still running conventionally with face-to-face meetings between students and educators. Conventional teaching and learning activities create social interaction between educators and students but are limited in space and time (Kim & Park, 2021). Digital technology influences the learning process and methods. Many educational institutions, significantly higher institutions, have used e-learning to e-books as a medium for delivering material. This solution makes it easier for students to access material and study anywhere and anytime (Fauzi, 2022).

The Ministry of Education and Culture, as an institution managing education in Indonesia, welcomes the development of technology to support the advancement of education in Indonesia. The Minister of Education and Culture currently endorses the role of technology in advancing education, especially at the tertiary level, with Kampus Merdeka Program. According to (López-Pérez et al., 2011), students prefer the learning process that adopts information technology in conventional classrooms. By collaborating with technology as a learning medium, students can study freely.

The use of technology in education that has been widely used in Indonesia today is E-Learning. E-Learning has several weaknesses, such as inhibiting students' face-to-face communication and social interaction (Al-Smadi et al., 2022). With several flaws of E-Learning, a new learning method appears, namely, Blended Learning (Adams et al., 2018). The main idea of the Blended Learning method is to expose students to a new learning process or practice by utilizing technology to improve the quality of

student learning (Yasin et al., 2020). Blended Learning is a combination of both face-to-face and virtual learning. Blended Learning has other terms that mean the same, Hybrid Learning and Mixed Mode Learning (Noviansyah, 2015). Blended Learning does not leave learning activities conventional/face-to-face because body language, tone of voice, facial expressions, and eye contact are one form of excellent communication (Tayebinik & Puteh, 2013; Adams et al., 2018). There needs to be a readiness to support the Blended Learning method in infrastructure and material conveyed. In this learning process, students are required to be independent and make efforts to plan, manage, and direct their learning processes (Yulia, 2017).

Many preparations need to be made so that the application of the Blended Learning method runs smoothly. Several components need to be prepared to implement the Blended Learning method. Each part is interconnected. These components start from the network infrastructure, media, material, processes, and the readiness of educators and students. Some of these things need to be prepared so that the Blended Learning method can achieve the desired learning goals and run optimally (Hu et al., 2022).

The outbreak of the COVID-19 pandemic made the realization of Blended Learning implementation more tangible. This unpredictable situation is allegedly one of the causes of the unpreparedness of the higher education academic community in dealing with the application of Blended Learning (Dehghan et al., 2022). On the other hand, according to Tang (2013), there is a negative relationship between attitudes toward learning in class and Blended Learning. The stronger the need to know in class is, the more unprepared students are to follow the Blended Learning method of learning. Although several research discussed the implementation of the Blended Learning method in general, few discussed a detailed and practical strategy to tackle each problem resulting from the unpreparedness of all stakeholders, especially in the middle of a pandemic situation. Based on this unpreparedness, this research aims to analyze the readiness to implement blended learning in higher education and formulate practical recommendations.

This research used the ELR (E-Learning Readiness) Model to measure readiness in applying Blended Learning methods. Measurement of E-Learning Readiness was carried out to determine the organization's level of preparedness quantitatively. The E-Learning Readiness model used in this study was the Aydin & Tasci E-Learning Readiness model. This model was used because the factors or variables assessed were suitable for studying the object. There are four factors in the Aydin & Tasci E-Learning Readiness model: human, technology, innovation, and self-development. Human factors are assessed from the ability and characteristics of existing resources in the organization in the application of Blended Learning. Technological aspects are evaluated from the organization's ability to utilize technology in Blended Learning. The innovation factor comes from the skill and experience of resources in the past. They will have an impact on innovations that will be created. Then, self-development factors are assessed from organizations' ability to self-development in applying Blended Learning (Aydin & Tasci, 2005). These four factors include all stakeholders in the organization directly involved in implementing Blended Learning, so the ELR model proposed by Aydin & Tasci was considered suitable for this study.

2. Literature Review

This study referenced several studies that use a similar method. Some previous studies used the ELR model. The ELR models used were, among others, sparked by Chapnick and Aydin, and Tasci. The technique used in (Readiness et al., 2013) was the ELR Chapnick model. There are eight factors in Chapnick's ELR model: Psychological readiness, Sociological readiness, Environmental readiness, Human resource readiness, Financial readiness, Technological skill (aptitude) readiness, Equipment readiness, and Content readiness (Readiness et al., 2013). The ELR Chapnick model assesses eight factors that influence the level of preparedness. This model will provide measurement results of these

factors evaluated in the form of a score that will determine the rank of e-learning readiness. Measurements using the Chapnick model only focus on e-learning users, such as teachers and students (Ramadan et al., 2019).

The ELR (E-Learning Readiness) model can be developed by adjusting and grouping measurement variables based on each object's substance. In Fariani (2013), the measurement of the e-learning readiness level used the ELR Chapnick model developed from several kinds of literature and previous studies, so not all assessment variables/components in the ELR Chapnick model are used. From the results of the development of the ELR model conducted by Fariani (2013), there are six dimensions/measurement variables, namely Human Resources, Organization, Technology, e-learning Materials, Finance, and Infrastructure (Fariani, 2013). The ELR model developed by Fariani (2013), was then collaborated with the ELR (E-learning Readiness) toolkit to measure the level of readiness for implementing e-learning. Measurement of readiness level using the ELR (E-learning Readiness) toolkit is based on the eMM (e-Learning Maturity Model) developed by Connecting For Health, which is part of the UK health department responsible for IT in the health sector (Fariani, 2013).

Unlike the research conducted by Readiness et al. (2013); Fariani (2013); Aydin & Tasci (2005), analyzed that four factors could be used as indicators to measure readiness. Four factors measuring the preparedness level are Technology, Innovation, People, and Self Development. Roger Aydin & Tasci (2005), reveals that technology influences assessing the readiness level for implementing e-learning. Technology is one of the factors that can be used effectively to adapt to technological innovation in an organization (Aydin & Tasci, 2005). The main factor influencing a change from before for the better is Innovation, so Innovation is one of the evaluation factors in the research. The next factor is People because, in his study, people become part of human resources in an organization so that it has a significant enough role. The last factor used by Aydin & Tasci in their research was Self Development. Self-Development is the previous factor used to assess organizations' readiness for the application of e-learning.

Based on several previous studies, the Blended Learning readiness level research can use or adopt Aydin & Tasci's research, which uses four factors as an assessment indicator. The researchers selected Aydin & Tasci's analysis because these factors are relevant to the Blended Learning method that will be applied in educational institutions. Besides, Aydin & Tasci's research also has a specific measurement method, which is also used by several studies but with a different ELR model. However, the indicators or instruments used will be adjusted to the object of this study. This step was done because Aydin & Tasci's research assessed the readiness of e-learning in the industrial world, while this research focused more on education. Also, the ELR model proposed by Aydin & Tasci determines the level of readiness using four factors that encompass all stakeholders at the university in the application of Blended Learning.

3. Research Methods

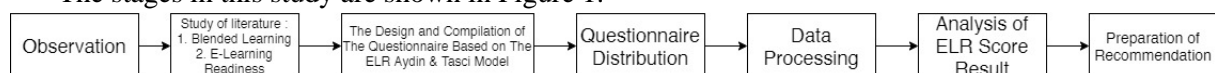The stages in this study are shown in Figure 1.

Figure 1. Research methodology

3.1. Observation

We observed face-to-face and virtual classes' teaching and learning processes at this stage. When the Blended Learning method was applied, lecturers and students were unprepared, so this situation encouraged the researchers to assess the readiness level for using the Blended Learning method.

3.2. Literature Studies

At this stage, we conducted a theoretical study of Blended Learning methods. A literature study was used to know the concepts of Blended Learning methods and as a basis for carrying out this research. To make questionnaires, the researchers searched for literature related to the questions.

3.3. Sample Calculation and Questionnaire Formulation

This research used a survey approach with a research instrument using a questionnaire adapted from Aydin & Tasci (2005) using the Likert Scale. This study was conducted in one of the private universities in Indonesia. The population of this research was 8004. This study had a heterogeneous population consisting of Lecturers, Students, and University employees. The distribution of samples was done because the three groups were directly involved in Blended Learning. Students experienced changes in previous learning, which was done in full face-to-face meetings into mixed face-to-face and virtual—the lecturer was responsible for providing material in the teaching and learning process. Employees support Blended Learning activities by preparing LMS (Learning Management System) and another learning portal as a medium in the Blended Learning process, as well as managing lecture administration. The appropriate technique for sampling in this study is the Stratified Random Sampling technique with the type of proportional-sample collection (Priyono, 2008). The total sample was calculated using the Slovin, shown in Formula (1), and 381 was obtained as the total number of pieces. N is a minimal number of samples, N is the total population, and e is the margin of error.

$$n = \frac{N}{1 + Ne^2} \tag{1}$$

To calculate the sample from each role, the researchers used Formula (2), dividing each role population by the total population and multiplying it with the full model obtained before (Priyono, 2008). It produced 360 students, 18 lectures, and four employees as a sample.

$$sample = \frac{Population}{Total\ Population} \times Total\ sample \tag{2}$$

3.4. Data Processing

Equation (3) is an equation from the ELR Aydin & Tasci model to obtain an ELR score. The calculation was done by adding up the total answers for each question, then looking for the average complete explanations for each question for each factor to be assessed using the Aydin & Tasci rating scale (Aydin & Tasci, 2005). $\bar{x}$ is final average, $\sum x$ I is sum of total score, and n is total number of respondents.

$$\bar{x} = \frac{\sum x}{n} \tag{3}$$

3.5. ELR Score Analysis

The process of analyzing the data processing results will be carried out using the Aydin & Tasci rating scale. The rating scale consists of four categories, shown in Figure 2. The classes are: Ready and implementation can be implemented (when from the questionnaire result calculation obtained 4.2-5 points), Ready but needs a slight improvement (when from the questionnaire result calculation received 3.4-4.2 points), Not ready and needs a little modification (when from the questionnaire result calculation obtained 2.6-3.4 point), and (4) Not prepared and requires a lot of improvement (Aydin & Tasci, 2005).
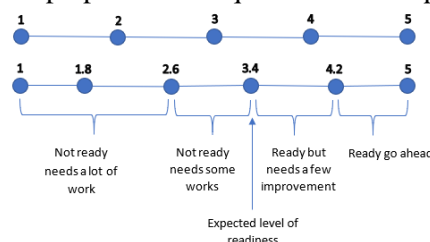
Figure 2. E-learning readiness rating scale (Aydin & Tasci, 2005)

3.6. Recommendation Formulation

After the data processing results were assessed using the Aydin & Tasci rating scale, the researchers provided recommendations for improvement based on the assessment results.

4. Result and Discussion

From a total of 408 respondents collected, only 392 respondents could be processed for analysis. This amount exceeded the minimum data that must be obtained in this study, which was 381 respondents. The questionnaire was then recapitulated and calculated using equation x. The results of calculations for each question and the factors, along with their rating scale, are in Table 1.

Table 1. ELR score and rating scale

Factor	Code	Statement	Average Score	Information	Average Per Factor
People	P1	Students know the KBM method with Blended Learning	3,86	Ready but needs a few improvements	3,42 (Ready but needs a few modifications)
	P2	Some students have a significant understanding of implementing KBM with Blended Learning	3,5	Ready but needs a few improvements	
	P3	Some students have the will to develop KBM with Blended Learning	3,56	Ready but needs a few improvements	
	P4	Most students know about online learning	3,59	Ready but needs a few improvements	
	P5	Some students have participated in training for online learning	2,86	Not ready needs some work	
	P6	The University has experts who can assist students and lecturers in implementing Blended Learning (KSI, UPTF, Blended Learning Creative Teams)	3,33	Not ready needs some work	
	P7	Lecturers can make innovative and creative learning	3,39	Not ready needs some work	
	P8	Students voluntarily join Blended Learning classes created by lecturers	3,83	Ready but needs a few improvements	
Self-Development	P9	Students use the time to study through the lecture website (10,15,30 or 60 minutes every morning, afternoon, evening, or night)	3,42	Ready but needs a few improvements	3,54 (Ready but needs a few modifications)
	P10	UAJY urges students and lecturers to implement KBM with Blended Learning	3,96	Ready but needs a few improvements	
	P11	According to students, KBM with Blended Learning is feasible to be implemented by every lecturer	3,65	Ready but needs a few improvements	
	P12	According to students, UAJY is ready to implement KBM with Blended Learning.	3,36	Not ready needs some work	
	P13	According to students, Blended Learning is ready for all lecturers	3,05	Not ready needs some work	
Technology	P14	Students have the hardware (computers, tabs, or other devices) individually to access KBM Blended Learning	4,02	Ready but needs a few improvements	3,94 (Ready but needs a few modifications)
	P15	Students have internet access for KBM with Blended Learning	3,54	Ready but needs a few improvements	
	P16	Students can access the internet from outside UAJY	3,78	Ready but needs a few improvements	

Factor	Code	Statement	Average Score	Information	Average Per Factor
Innovation	P17	Students have the necessary skills in operating hardware (computer, tab, or other devices)	4,13	Ready but needs a few improvements	
	P18	Students have the necessary skills in using the internet, such as browsing, e-mail, etc	4,36	Ready go-ahead	
	P19	Students can understand and follow the instructions in Blended Learning to complete assignments	3,84	Ready but needs a few improvements	
	P20	Students are used to using hardware (computers, tabs, or other devices) to complete assignments	4,23	Ready go-ahead	
	P21	Lecturers have expertise in using hardware (computers, tabs, or other devices) for KBM with Blended Learning	3,59	Ready but needs a few improvements	
	P22	Most students voluntarily adapt to online learning activities	3,77	Ready but needs a few improvements	
	P23	Students feel the change in the use of technology for KBM with Blended Learning	4,06	Ready but needs a few improvements	3,43 (Ready but needs a few modifications)
	P24	UAJY has prepared infrastructure for KBM with Blended Learning	3,51	Ready but needs a few improvements	
	P25	Students feel the changes in lectures become more effective with KBM Blended Learning	2,91	Not ready needs some work	
	P26	Students quickly adapt to changes from conventional learning to Blended Learning	3,21	Not ready needs some work	
	P27	Lecturers quickly adapt to changes from conventional learning to Blended Learning	3,11	Not ready needs some work	

4.1. People Factor

From data processing, the researchers obtained an average ELR score from people factors of 3.42, which means the university is ready but needs a few improvements from the people aspect. Three ideas had not reached the expected level from the seven statements on people's factors. The three statement items were: (1) some students have participated in training for online learning, (2) The University has experts who can assist students and lecturers in implementing Blended Learning, and (3) Lecturers can make innovative and creative learning. From those three items, the researchers recommend several recommendations, such as:

4.1.1. Increasing dissemination and information sharing to students and lecturers about the technical implementation of Blended Learning methods.

The socialization of the technical application of Blended Learning methods has not been comprehensive and needs to be maximized. This statement is supported by the fact that most students had not received sufficient information. There were 43 % of students said they had not followed online learning training. Besides, there were also comments from students regarding Blended Learning guidelines. "Blended Learning needs to be improved with clear guidelines and anticipation for those who lack internet facilities. ... "- Student A. From Lecturer's perspective, the technical socialization of Blended Learning methods to students was still not comprehensive. The following statement supported this"... However, and there needs to be a deep understanding and preparation. Given the current conditions, lecturers and students are not ready for online learning ... "- Lecturer A. From some of the reasons and facts above, the researchers suggest increasing socialization and sharing information with students and lecturers about the technical implementation of Blended Learning methods.

Socialization and information sharing can increase the trust of relevant stakeholders, in this case, lecturers as material providers and students as participants and material receivers (Kulangara et al., 2016). Socialization can be done in several stages. Starting with an introduction to Blended Learning methods, next is to give some technical guidelines for implementing Blended Learning, then monitoring Blended Learning implementation. For monitoring, an Ad Hoc team can be formed. The Ad Hoc team will specifically deal with the supervision of implementing the Blended Learning method. The last stage is evaluating the application of Blended Learning methods. The evaluation results will be used as input for continuous blended learning improvement.

4.1.2. It was forming a special or Ad Hoc team that accompanies and guides the application of Blended Learning methods.

The formation of a unique team that accompanies implementing the Blended Learning method needs to be done because the lecturers and students are still not entirely supported. 56% of lecturers and 44% of students consider that the university has an expert who can assist students and lecturers in implementing blended learning. Unfortunately, they are not explicitly assigned as a blended learning team or committee. Besides that, several lecturers stated that they had not received thorough assistance. This fact could be seen in the comment given by a lecturer. "...My friends and I are aware of the existence of blended learning, but my current assumption is that there is still a stutter in using e-learning learning models. Blended learning (a hybrid between offline and online classes) now becomes more dominant in online courses because of Covid-19 ... "- Lecturer B. Another suggestion from another lecturer was, "...Blended learning can work well if there is sharing of knowledge between lecturers, ready infrastructure, human resources able to overcome technical problems quickly, and also internet data package compensation following the situation of students and lecturers ... "-Lecturer C. From some of the facts and reasons above, we suggest the formation of a unique team that accompanies and guides the application of Blended Learning methods. The Ad Hoc team is helpful because it incorporates a participatory management style, higher control processes, more communication lines, and more management commitment (García et al., 2006).

The team can consist of staff representatives from the IT Department, IT support representatives from each faculty, employee representatives from the faculty, lecturers in each study program, and, if possible, there are student representatives to support as assistants. The team can be tasked with conducting the socialization explained in the recommendations in point 4.1.1. Also, this team can be a helpdesk that accepts suggestions, criticisms, complaints, and questions and handles obstacles when implementing the Blended Learning method. The unit can also research to find ways and learning platforms appropriate for each study program's courses. The team also worked synergistically with the lecturers supporting the practices to plan appropriate strategies for Blended Learning according to their teaching classes.

4.1.3. They are giving grants to stimulate the lecturer's creativity and productivity.

Students have not significantly felt the lecturers' creativity in presenting material with the Blended Learning method. 53% of students said lecturers could not create innovative and creative learning. Student respondents noted that some lecturers could not utilize and maximize existing technology. Some students' suggestions also show lecturers' lack of creativity in delivering material, such as

"There are still some lecturers who only give ppt and assignments without giving explanations/videos. Material from ppt is ineffective if there is no explanation from the lecturer concerned"-Student B.

"There many lecturers who, for me, are not maximizing the benefits of a forum for online lectures such as zoom, google classroom, etc. because they only give assignments without giving any explanation, which for me is less efficient. "-Student C.

Besides conducting socialization related to the application of Blended Learning, the motivation and enthusiasm of lecturers are also raised by offering grants from the University or external parties. Grants or funding positively increase the amount of output (Beaudry & Allaoui, 2012). The various assignments, such as Adjustment of Learning Plans, are adapted to the Blended Learning method and the creation of digital learning content. Administrators of study programs and faculties are expected to be able to encourage lecturers to continuously increase creativity and willingness to learn new things to provide more innovative learning material.

4.2. Self-Development Factor

From data processing, the researchers obtained an average ELR score from Self-Development factors of 3.54, which means from the Self-Development aspect, the university is ready but needs a few improvements. Of the six statement items on self-development factors, two statement items had not reached the expected level. The two statement items are: (1) According to students, the university is ready to carry out teaching and learning activities with Blended Learning, (2) According to students, Blended Learning is available to be carried out by all lecturers. Of the two items that have not yet reached the expected level of readiness, we give several recommendations such as:

4.2.1. It is conducting a thorough evaluation of the application of Blended Learning methods already underway

46% of students, 50% of lecturers, and 100% of employees consider the university ready to do the teaching and learning process with blended learning. However, the overall readiness score obtained for all respondents only reached 3.36 from the expected level of 3.4. Only 0.04 adrift. Universities already have adequate resources and infrastructure to implement blended learning. However, what is owned is allegedly still not optimal because of the COVID-19 pandemic, which requires that all students, lecturers, and employees suddenly carry out all education processes online. Stuttering due to the outbreak has made some parties and infrastructures not ready if learning to be done online. Because the learning process of blended learning has been running for approximately one semester, and suddenly there is an unwanted thing, that is, the COVID-19 pandemic, it is necessary to conduct an in-depth evaluation of the teaching and learning process, especially those that are carried out online. From the evaluation result, the institution needs to study and design strategies for implementing Blended Learning methods that are more precise, efficient, and effective. Some opinions state, "For the concept of Blended Learning is expected to be conceptualized thoroughly and not merely given assignments that only make students stressed"-Student E. Other inputs include "Blended learning can run well if there is a knowledge sharing among lecturers, ready infrastructure, human resources capable of overcoming technical problems quickly, ..."-Lecturer F.

From some of the facts and reasons above, the researchers suggest evaluating the application of Blended Learning methods that have been taking place regularly. Evaluation influences motivation and self-perception of competence, devising approaches, consolidation, strategies, and learning time (Crooks, 1988). Besides, evaluation is one way to increase the deficiencies in applying Blended Learning methods.

4.2.2. Provide training and clear direction for lecturers in preparing teaching materials with Blended Learning methods.

Only 35% of students agreed that the learning process in blended learning was ready to be carried out by all lecturers. Lecturers need to be given knowledge and training on the concept of learning Blended Learning so that the presentation of material can be adjusted according to the subject. There was the advice given by the respondent that lecturers need to be given training for teacher readiness.

Besides, some respondents argued,"It should be determined how Blended Learning should be implemented whether just doing assignments or lecturers teaching through applications. It cannot depend on each lecturer's decision, but it must be a university decision,"-Student F. The statement shows that the Blended Learning mechanism must be more clarified. As the previous factors explained, lecturers need assistance, workshops, and training to prepare themselves for applying Blended Learning methods.

From some of the reasons and facts above, the researchers suggest providing training and clear direction for lecturers in preparing teaching materials with Blended Learning methods. Also, in (García et al., 2006), it is found that training is a vital step in improving the performance of an institution. It can uniform the Blended Learning method so that both lecturers and students are not confused when applying the teaching and learning process.

4.3. Technology Factor

From data processing, Technology factors had an ELR score of 3.94. This result shows that the readiness level for applying Blended Learning methods in university is ready but needs some improvement. This result is the highest score of all factors on ELR Aydin Tasci. Overall the question items on technological factors met the expected level. It shows that most students and lecturers have the hardware (pc, laptop, tab, etc.) and an internet connection to conduct teaching and learning with blended learning. Only 6% of students do not have the hardware, and 17% do not have an internet connection to access knowledge by blended learning. Most students and lecturers already have the necessary skills to operate tools such as hardware and internet usage used to carry out the teaching and learning process with blended learning. It can be seen that only 2% of students are not accustomed to using hardware and the internet. From this fact, the researchers suggest a slight improvement related to IT infrastructure. If, before blended learning is implemented, the university's IT infrastructure is sufficient to accommodate the lecture process, after the implementation of blended learning and the existence of this COVID pandemic, the existing IT infrastructure has not adequately provided the teaching and learning process finally conducted in full online. It can be seen from the downturn in college sites and systems at the university due to increased access to the system. The suggestion for Technology factors such as:

a. Improving server capability so that it does not often experience damage or down
b. Purchasing software licenses that can support the application of the learning process using Blended Learning methods, such as presentation editing software consisting of Powtoon, Doodly, Videocsribe, etc., and video editing software such as Adobe Premiere, After Effect, Vegas Pro, and so on
c. Supplying supporting hardware such as a webcam, drawing pad, mic, camera, studio, and so on
d. Providing quota subsidies to students to access material when applying Blended Learning learning methods

4.4. Innovation Factor

From data processing, the average ELR score from Innovationfactors was 3.43, which means the university is ready but needs a few improvements from the Innovation aspect. Of the six statement items on the innovation factor, three statement items had not reached the expected level based on the Aydin & Tasci ELR Model. The three statement items were: (1) Students feel the changes in lectures become more effective with Blended Learning methods, (2) Students quickly adapt to changes from conventional learning to Blended Learning, and (3) Lecturers quickly adapt to changes from

conventional learning to Blended Learning. Of the three items that had not yet reached the expected level of readiness, the researchers give several recommendations, such as:

4.4.1. Designing a standardized learning model using the Blended Learning method.

36% of students did not feel the effectiveness of the blended learning teaching and learning process. This comment supported it: "Less effective because the infrastructure and facilities of the university and students are not yet qualified."-Student I. Besides, there are several other students' opinions, such as the following "Material that should be easily delivered when the offline class becomes ineffective when there is an online method ..."-Student J.

From some of the reasons and facts above, the researchers suggest designing a standardized learning model using the Blended Learning method. The intended standardization of learning models is to provide a portion for each learning model in applying Blended Learning methods. For example, it is to set 60% of the learning process is done face-to-face learning, then the remaining 40% is used for learning using virtual media. It is intended that each lecturer has a guide in teaching with the Blended Learning method. Standardizing can also improve the performance of processes, reduce maintenance costs, and better control processes (Marciniak, 2014).

4.4.2. Applying the learning methods using Blended Learning methods in stages

22% of students did not feel it easy to adapt from conventional learning to Blended Learning. From some of the reasons and facts above, the researchers suggest that the application of learning methods using Blended Learning methods is carried out in stages. The application of the Blended Learning method is made first with a smaller scale, such as in some courses with lecturers who are ready and can apply the Blended Learning method. The application will create a learning model and can be a reference to be involved in several other subjects. Besides, using a smaller scale will be more comfortable to evaluate so that it can run smoothly when implemented. Implementation with a gradual/stages strategy is more straightforward because it is more systematic to provide more efficient improvement (Crawley & Systems, 2014).

4.4.3. Provide training for lecturers in preparing teaching materials with Blended Learning methods

22% of lecturers felt uncomfortable adapting to changes from conventional learning to Blended Learning. It can be seen from the student's comment that "There are still many lecturers who have not implemented blended learning, so when online lectures a little overwhelmed ..."-Student K. Also, some students and lecturers give input, such as "I, as a student, hope that the lecturer will not give assignments continuously, but interspersed with the material delivered by the lecturer."-Student L. "Assistance should be given to lecturers who may not quite understand computer technology for blended learning"-Lecturer J. Besides, training, especially in the use of technology, is influential so that lecturers can adapt to Blended Learning methods with more technology as a teaching medium.

From some of the reasons and facts above, the researchers suggest training lecturers prepare to teach materials with Blended Learning methods. Besides, training can familiarize some lecturers who still lack an understanding of the use of technology. Providing training can improve performance and achieve expected goals (García et al., 2006). García et al. (2006) state that training can provide a good experience for all segments, not only manufacturing. Training can also be a valuable tool for introduction and habituation in applying Blended Learning methods to educational institutions.

5. Conclusion

This research contributes to measuring readiness levels and provides practical recommendations for applying Blended Learning methods in higher education. The overall readiness level for Blended Learning implementation is 3.58. This result shows that the level of readiness is at the ready stage and needs a slight increase. The recommendations such as increasing socialization to students and lecturers

about the technical implementation of Blended Learning methods; forming a special team that accompanies the application of Blended Learning methods; giving grants to stimulate the creativity of lecturers; evaluating the application of Blended Learning methods that are already underway; providing training and clear direction for lecturers in preparing teaching materials with Blended Learning methods; improving server capability so that it does not often experience damage or down; purchasing software licenses that can support the application of the learning process using Blended Learning methods such as presentation editing software consisting of Powtoon, Doodly, Videocsribe, etc. and video editing software such as Adobe Premiere, After Effect, Vegas Pro, and so on; supplying supporting hardware such as webcam, drawing pad, mic, camera, studio, and so on; providing quota subsidies to students to access material when applying Blended Learning methods; designing a standardized learning model using the Blended Learning method; applying the learning methods using Blended Learning methods; and providing training for lecturers in preparing teaching materials with Blended Learning methods. Considering the importance of the Blended Learning application, the number of institutions researched in the future can be added. This kind of research can also be implemented in other educational stages. Hence, the benefit of this learning method can be perceived optimally by each educational institution in Indonesia.

Acknowledgment

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