



The Post Pandemic Education : A Blended Learning Approach for Teaching and Learning in Higher Education in New Normal Era

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Abstract

The Covid-19 virus that spreads very quickly causes everyone to have to practice social distancing and physical distancing to reduce its impact. The virus that has been endemic since the end of December 2019 has revolutionized the learning process held by every educational institution, including the learning process in universities. Previously, the learning process at universities was carried out face-to-face. When the covid-19 pandemic occurs, the learning process must of course continue to be carried out by minimizing the impact of covid-19 so that universities must be able to make changes quickly from face-to-face learning systems to online/online learning. Adopting online learning through the use of technology to continue to implement the Tri Dharma is one of the solutions chosen by each university so that the learning process can continue and the spread of the COVID-19 virus can be minimized. After covid-19 occurred and the new normal era began, the level of life gradually went on as before. Learning in higher education must of course be re-adjusted to existing conditions. Finally, blended learning is used as a solution to carry out the teaching and learning process in universities in the new normal era. Blended learning approach is believed to be one of the learning models that are considered more effective for learning in this new normal era. By continuing to use technology as a form of innovation in learning in the digitalization era, blended learning is also still carried out by continuing to prioritize the human touch side in its implementation where the face-to-face learning process with direct interaction certainly has its own advantages. Through the combination of the advantages of offline learning and online learning, blended learning appears as the best alternative in the higher education learning system so that learning is believed to be more meaningful and also supports independence in learning.

Keywords: Blended learning, covid-19, digital educational technology, learning in higher education, new normal, post pandemic.

1. Introduction

The Covid-19 pandemic has spread throughout the world and forced people to keep their distance so that every country enforces social distancing (Herdiana, 2020; Pedersen & Favero, 2020) and physical distancing. This condition certainly significantly disrupts all sectors in every country, including the education sector which is an important determinant of the economic future of a country (Corell-Almuzara et al., 2021; Jena, 2020; Dreesen et al., 2020; Teräs et al., 2020; Thahir et al., 2021). The general education situation in the country has changed when the first cases of COVID-19 coronavirus infection were detected in the country. After observing the situation of the coronavirus pandemic, WHO recommends social distancing as the first preventive measure? So, every country started the lockdown measures to separate the contaminated people. The education sector including schools, colleges and universities was closed. Classes are suspended and all school, college and university exams including entrance tests are postponed indefinitely. Thus, Lockdown destroys every student's schedule. Although this is an extraordinary situation in the history of education, COVID 19 has created many opportunities to move away from the strict classroom teaching model to a new era of digital models (Ahmad & Zabadi, 2020). This means that the COVID-19 pandemic causes online learning to occur simultaneously. The online learning tsunami has occurred almost all over the world during the COVID-19 pandemic (Goldschmidt & Msn, 2020). Lecturers as an important element in teaching in universities are required to make an unprecedented massive migration from traditional face-to-face

education to online education or distance education (Bao, 2020; Basilaia & Kvavadze, 2020). In this case, the most important thing is the reach of the internet, the availability of computers or smartphones in the community.

The COVID-19 outbreak is driving distance education testing like never before (Sun et al., 2020). This epidemic is revolutionizing the learning that is organized by the campus. The Covid-19 outbreak has disrupted the Tridharma of Higher Education. In the field of education and teaching, prior to the pandemic, the learning process was carried out with a face-to-face method, when the pandemic occurred; the learning process began to be carried out online. Even the graduation processions at various universities have been carried out online. In other words, in a short time, campuses are forced to carry out the tri dharma of higher education online. There are about 97% of universities in Indonesia have adopted online learning (Dikti, 2020). In addition, online learning is also a tangible manifestation of technological developments that are not limited to the current 4.0 industrial revolution. Although educators and students cannot meet in person, the online teaching and learning process is an effective method (Verawardina et al., 2020) when a pandemic occurs.

The story of this pandemic ends differently in countries around the world. Handling and controlling the impact of COVID-19 all depends on the policies made and implemented by the government to prevent and control the spread of the virus and its impacts (Batubara, 2021). After Covid-19 was declared over and began to enter the new normal era, the level of life gradually went on as before. Learning in higher education must of course be re-adjusted to existing conditions. The next main problem is how to run the learning process in the new normal era after going through a pandemic that caused universities to provide online learning platforms, such as E-Learning. Besides universities already having online learning platforms, when the new normal begins, learning must also be adapted to current conditions. In addition, universities have a mixture of students with different preferences and learning styles which of course in its implementation requires the use of multiple learning modalities in order to deliver the right learning content in the right form (Singh, 2003).

Therefore, it is time for higher education to develop in accordance with expectations to help students survive effectively in a technology-based world like this in the new normal era. Integrating technology with face-to-face learning can strengthen an interactive and communicative learning environment and provide meaningful learning outcomes (Rooney, 2003; Garrison & Kanuka, 2004). Answering this condition, alternative learning that can be used is to apply blended learning. Blended Learning learning model is a learning model that integrates technology in the learning process. The implementation of this learning allows the use of online learning resources, especially web-based ones, without leaving face-to-face activities. This learning style is usually defined as the integration of traditional classroom methods with online activities (called "e-learning") (Garrison & Kanuka, 2004; Graham, 2006; Macdonald, 2008). According to the Center for Educational Research and Innovation mixed learning programs are becoming increasingly significant (CERI, 2005), with ICTs being developed to complement, not replace, traditional forms of learning (Mitchell & Forer, 2010) In other words, the widespread use of digital technology has changed the face of education. Finally, blended learning is used as a solution to carry out the teaching and learning process in universities in the new normal era.

Based on the description above, through this article, the author intends to describe the post-pandemic learning process in higher education, namely 1) explaining the blended learning approach as a learning model, 2) the advantages of the blended learning approach and 3) the challenges in learning using the blended learning approach.

2. Literature Review

2.1. Covid-19

In recent times, various countries in the world have been surprised by spectacular outbreaks, namely outbreaks of diseases caused by a virus called corona or better known as covid-19 (Corona Virus Diseases-19). This virus originally existed and began to develop in Wuhan, China. This virus outbreak spread very quickly to various countries so that the World Health Organization (WHO) declared it a world pandemic.

2.2. Online Learning and Digital Educational Technology

The development of this era can be seen from the many changes that affect many aspects of business, industry, social life, politics and education (Istifadah et al., 2020). The times have also caused a change in learning to online learning. Online learning requires technological capacity for its implementation. Infrastructure that can be used to support free online learning for discussion can be accessed such as Google Classroom, Whatsapp, Smart Class, Zenius, Quipper and Microsoft (Abidah et al., 2020). This whole platform requires technology. The use of technology in learning is also an effort made by higher education to make improvements in the learning process (Orton-Johnson, 2009), and complement traditional teaching and learning methods. Diversity is one of the main characteristics of higher education because classes consist of different genders, cultural backgrounds, learning preferences, economic levels, language proficiency. Technology supports this diversity, because there are various features that can serve different types of students with different backgrounds. For example, a Learning Management System (LMS) is used to manage the learning environment in an online context (Okaz, 2015).

Digital education technology (DET) as all digital technologies designed or used for learning and teaching activities in the context of formal or informal education. Educational technology capabilities (ETC) are defined as a common set of capabilities that exist in various digital technologies that enable a set of learning objectives (eg, personalization). The main assumption is that capabilities are built on a typical combination of technological characteristics and tool functionality. Thus, capabilities can exist in multiple tools and one tool can provide multiple capabilities. This perspective can present ETC as a mechanism for evaluating and comparing technology implementations and their transformational potential. Figure 1 presents a conceptual model that represents the relationship between digital technology characteristics, tool and platform functionality, and capabilities in educational technology (Castro, 2019).

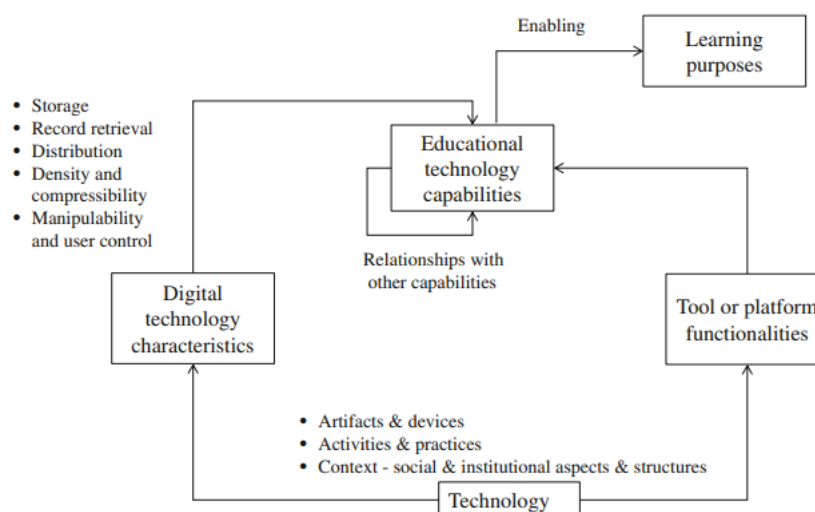


Figure 1: Conceptual model of technology capabilities (Castro, 2019).

3. Materials and Methods

This research is a descriptive analysis study with systematic review as a data collection medium to present the results and discussion of the topics discussed in this article. The author structured this study using a literature-based approach to concept development Branch dan Rocchi 2015). Documents used in the form of related research journals, articles, papers related to the blended learning approach in learning in universities. The systematic review method used in the preparation of this article is to synthesize or summarize, which is to make a summary of various kinds of expert opinions collected from several scientific works by integrating various kinds of data collected to compile a concept or a more in-depth and comprehensive understanding of a topic that is being studied. Discussed (Perry & Hammond, 2002). In preparing this article, the systematic review steps used are 1) formulating the review question 2) conducting a systematic literature search 3) screening and selecting appropriate research articles 4) analyzing and synthesizing qualitative 5) maintaining quality control 6) presenting finding (Francis C. & Baldesari, 2006).

4. Results and Discussion

4.1. What Is Blended Learning?

The 21st century is an era of globalization marked by rapid changes in the field of information and communication technology, the economy, including education. Sophisticated technological advances shift the way students think about the learning process. Students are more interested in learning to use technology media such as mobile learning which can be accessed anytime and anywhere. Face-to-face learning traditionally makes students easily bored and the time used to carry out learning is not enough because of limited space and time. Coupled with the Covid-19 phenomenon, which forces changes in learning methods. Higher education must be able to adapt to the needs and demands of post-pandemic and technology. Experts develop learning processes for students that are in accordance with their learning methods and styles to optimally achieve the goals of the learning process as well as by adopting technological advances and adapting to life after the Covid-19 pandemic. Finally, the blended learning approach was chosen as the most effective learning approach considered effective.

In the new normal era, education requires technology that can facilitate interaction between teachers and students. The application of blended learning is entirely appropriate because it will make it easier for students and teachers to interact anywhere and anytime (Diana et al., 2022). Blended learning is a "buzzword" that is still ambiguous. Most authors agree on the definition of a blended learning system as a combination of face-to-face learning with computer-mediated learning (Graham, 2006; Rooney, 2003; Young, 2002).

Blended learning is learning that combines the best of synchronous and asynchronous learning approaches to meet specific educational goals (Levin et al., 2013). Synchronous learning approach is defined as live and real-time facilitated instruction that is usually scheduled (Shahabadi & Uplane, 2015). This means that learning activity is carried out by the teacher and students at the same time and it is commonly facilitated by media such as videoconferencing and chat. For example, the teacher conducts synchronous e-learning through Zoom meeting or Google meet. Teachers and students conduct synchronous e-learning as more social activity which means it helps students to be more aware of themselves as parts of a community instead of isolated individuals who communicate with the computer (Hrastinski, 2014). On the other hand, asynchronous learning is an interactive learning activity that is not limited by time and place. In other words, asynchronous learning emphasizes the flexibility of e-learning so the students can learn anytime and anywhere. For example, the students sign in e-learning at any time and they can download materials in forms of documents or pdf, and they can send messages to teachers or peers. Furthermore, Hrastinski states that asynchronous learning is commonly supported by media such as email, Google Classroom, support work relations among teachers and students, even when the students cannot be online at the same time. This combination between synchronous and asynchronous learning style is one example of blended learning. The combination between synchronous and asynchronous learning style is one example of blended learning (Sakina et al., 2020).

Blended learning can take various forms, thus allowing users to adapt a program that best fits their pedagogical goals and physical setting. Blended learning may include a station rotation, lab rotation, flipped classroom, or individual rotation among other forms (Christensen et al., 2013; Horn & Staker, 2011).

Blended learning helps students to gain knowledge easily. Some parts of the curriculum are studied by students online and some parts are instructor-led through lectures, webinars, etc. Online and instructor-led training complement each other and create an integrated learning environment (Badre, 2020).



Figure 2: Blended Learning by Badre, (2020).

The blended learning provides instructors and learners with a comprehensive learning model. They may experience the excitement of physical classroom formats such as lectures, books, labs, handouts and the integration of telecommunication technologies; computer, Internet, World Wide Web and mobile phone in their teaching and learning processes. Blended learning is becoming a popular approach in learning in universities. By combining various modes of delivery, blended learning not only offers more options but is also more effective. Blended learning is expected (Azizan, 2010):

1. Develop social communication in the community in Higher Education.
2. Increase the competence and self-confidence of students.
3. Provide a quality learning experience.
4. Develop critical thinking in a learning environment.
5. To integrate technology as an effective tool to deliver content to learners.

There are several proposed blended learning frameworks developed by researchers. The framework basically consists of several elements from both classroom delivery and online learning methods (Singh, 2021).

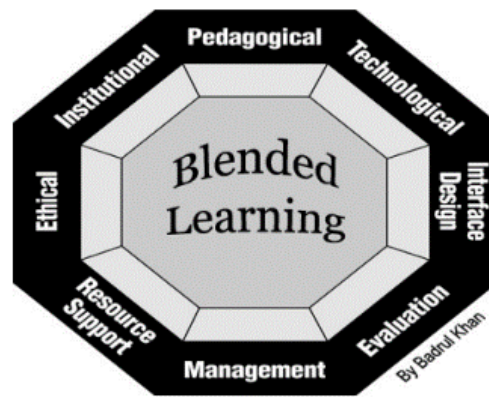


Figure 3: Khan Octagonal blended learning framework (Singh, 2021).

The framework has eight dimensions: institutional, pedagogical, technological, interface design, evaluation, management, resource support, and ethics (see Figure 3). Each dimension in the framework represents a category of problems that need to be addressed. These issues help organize thinking, and ensure that the resulting learning program creates a meaningful learning experience.

4.2. Advantages of Blended Learning

Blended learning is a recent development in education, combining face-to-face classes with e-learning modules (Voos, 2003), which makes it possible to enjoy the advantages of both teaching methods (Graham, 2004; Harding, Kaczynski, & Wood, 2005). Other advantages include greater flexibility (Graham, 2004; Macedo-Rouet et al., 2009) and reduced costs compared to traditional classrooms (Harding et al., 2005), especially when large numbers of students have to be taught. This type of learning presents a series of advantages over the exclusive use of technology-based learning. Previous studies have reported that learning quality and outcomes are affected when students only use the method, possibly due to: a) lack of interaction with teachers and other students (Laurillard, 1993); b) delays in asynchronous learning (Lim, 2002); c) reduced motivation to read learning materials online (Lim & Kim, 2003). Blended learning may be able to enhance, extend, and even transform FTF learning (Alexander, 1999; Donnelly, 2010). Blended learning involves a paradigm shift where the emphasis shifts from teaching to learning (Nunan et al., 2000). According to previous research, supplementing traditional classrooms with online materials: a) has a positive effect on student performance (Boyle et al., 2003; Lim & Morris, 2009; O'Toole & Absalom, 2003); b) enabling the promotion of a flexible learning environment that strengthens student autonomy, reflection and research power (Chambers, 1999; Lebow, 1993; Tam, 2000); c) facilitate review and control of learning (Osguthorpe & Graham, 2003). In addition, blended learning has improved many elements in pedagogy such as access, flexibility, student engagement and participation (Alebaikan & Troudi, 2010; Gomez & Igado, 2008; Garrison & Kanuka, 2004). This fact makes blended learning a current trend in the field of education, especially in higher education (Maarop & Embi, 2016).

Blended learning combines face-to-face learning with digital technology. With blended learning, students have some level of control over the content, pace, timing, and location of their learning (Horn & Staker, 2011). Real-time data that is usually provided through digital technology in a blended learning approach helps lecturers differentiate teaching based on diverse student progress (Horn & Staker, 2011). Teachers using mixed learning can target instruction to the specific learning profile of their students, from Level III to gifted, as mixed learning models can support whole-class, small group, and independent work (Hilliard, 2015; Freeland, 2015; Powell et al., 2014).

As many authors have reported, students who have experienced blended learning value this mode of learning delivery because it adds other advantages to the flexibility and availability of online courses, such as hands-on interaction, learning support, and motivation (Fabry, 2012; Fearson et al., 2012). Like students in the UK, students tend to take blended learning courses as they seek flexibility, more support, motivation, idea sharing, interaction, and better communication (Fearson et al., 2011). Furthermore, in America, there is an increase in student performance after comparing the learning process with a blended learning approach with a traditional approach tradisional (Chan, 2011).

In studies that have explored blended learning in higher education, students in blended learning programs were reported to be more motivated (Vaughan, 2014), more supported (Lim et al., 2014), and provided with more useful resources (H Kim, 2014) than students who studied with traditional classroom learning methods. In both higher education and secondary schools, blended learning is used to personalize learning by providing students with more variety of learning than can be offered in traditional classrooms (Hilliard, 2015; Picciano et al., 2012).

4.3. Challenges of using blended learning in Higher Education

The success of blended learning is not the result of a simple integration of ICT with the FTF approach (De George-Walker & Keeffe, 2010). The use of mixed learning resources can result in changes in learning patterns and practices. Blended learning is widely applied in large-scale classrooms, such as the first year of undergraduate studies, which is an important year in determining student commitment to study at university (Huon et al., 2007).

The results of the search carried out by the researchers succeeded in creating a framework that there are three challenges in learning with blended learning, namely challenges for lecturers, challenges for students and challenges for institutions (Rasheed et al., 2020). The framework can be seen in the following image.



Figure 4: A taxonomy of challenges in the online component of blended learning (Rasheed et al., 2020)

5. Conclusion

Blended learning is an alternative learning that is quite effective to be implemented in the new normal era as it is today. Keeping your distance to break the chain of the corona virus can be done by applying blended learning. Blended learning is a combination of face-to-face learning and online learning. By continuing to use technology as a form of innovation in learning in the digitalization era, blended learning is also still carried out by continuing to prioritize the human touch side in its implementation where the face-to-face learning process with direct interaction certainly has its own advantages. Through a combination of the advantages of offline learning and online learning, blended learning emerges as the best alternative in the higher education learning system so that learning is believed to be more meaningful and also supports independence in learning. Learning becomes more flexible because it can be accessed anytime and anywhere. Blended learning is not only effective to be implemented in the new normal era but can also develop 21st century skills of students including critical thinking, problem solving, information literacy and others. There are many platforms that can be used for online learning such as websites, social networks, and LMS.

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