

## **Online Learning to Prevent the Spread of Pandemic Corona Virus in Indonesia**

**Henny Yulia**

University of Baturaja

[hennyulia78@gmail.com](mailto:hennyulia78@gmail.com)

**Abstract.** In March 2020 almost all cities in Indonesia face the scary viruses namely corona. The speed of the viruses spread influences all aspects of life without exception. Education system is one of the crucial things which is influenced by this virus. Whether want or not, the educators must change their way of teaching. Face to face in the class must be avoided. The purpose of this study is to clarify ways of corona virus pandemic reshape education. This study also explains about kinds of online learning which are used by the educators in the era of pandemic corona viruses in the world and the strategies to improve online teaching when university is closed. The advantages of using them are also clarified. In addition, the writer try to gain the information about the effectiveness of using online learning to teach.

**Key words:** *reshape, online learning, strategies, advantages, effectiveness*

### **INTRODUCTION**

The pandemic of corona virus boost the educators to teach at home. Trough presidential decree number 7 year 2020 about the task force for acceleration of coagulation covid-19 and minister of empowerment of the state civil apparatus decree number 34 year 2020 which change to circulars the decree number 19 year 2020. This decree contains the instruction to work from home until April 21<sup>st</sup>, 2020. This condition forces educators to teach the students through online system. Actually, it is not a problem for educators in urban area because they are accustomed to using it. The problems appear for the educators who are far away from internet network. It also happens to the students. The problems such as weak signal or even no internet access become disturbances in the process of teaching and learning.

Indonesian ministry of Education Nadiem Makarim through decree no 4 year 2020 which content about implementing education policies in the emergency phase of pandemic of corona virus. The policies content four main points. Firstly, Study at home trough daring or distance learning implement to provide learning experience without being burdened to complete the curriculum target for grade promotion or graduation. Secondly, distance learning can be focused on life skills education for example about covid 19. Thirdly, Students activities and task could be varied among students in accordance with their interest and condition including learning gap and facilities at home. The last, proof or product activity should be given feedback which is qualitative and useful for the teachers without giving a score or quantitative grade.

Actually, the face to face program and online program have their own strength and weaknesses. According to Jacobs (2013), online learning is as effective as traditional classroom learning. How much or how well a student learns is determined by the quality of the online instruction. If a course is well designed and well implemented, students will learn more than in a poorly designed course. According to study done by Learning House, Inc (2018), showed that 85% students who follow face to face and online learning felt that they have the same and some better experiences in learning for both face to face and online program. 37 % felt it as superior experience.

Stem (2019) clarified that online learning is the education that take place over the internet. It is often refers to as e- learning among other terms. However, online learning is just one type of distance learning, the umbrella term for any learning which takes place across distance and not in a traditional classroom. Distance learning has a long history and there are several types available today including: first, correspondence courses conducted through regular mail with little interaction. Second, Tele courses where content is delivered via radio or television broadcast. Third, CD-room courses. Here the student interacts with static computer content. Next, Online learning internet base courses offered synchronously and/or asynchronously. The last, mobile learning by means of devices such as cellular phones, PDAs and audio digital player (iPods and MP3 player).

Individualizing online learning by dynamically generating learning content based on the student's responses was found to be effective in the two studies investigating this topic (Grant and Courtoreille 2007; Nguyen 2007). Attempts to guide the online interactions of groups of learners were less successful than the use of mechanisms to prompt reflection and self-assessment on the part of individual learners. Some researchers have suggested that students who learn in online groups provide scaffolds for one another (Suh 2006).

In relation to the spread of corona virus and it influences to the teaching and learning programs appear some questions which must be answered: Firstly, How is corona virus pandemic reshape education?" , Secondly, what kind of online learning used by the educators to prevent this pandemic?" , Thirdly, What are the advantages and s disadvantages of using it?" Fourthly, What are the strategies used to improve online teaching when university is closed?". Finally, is online learning effective to be used?".

### *Conceptual Framework of Online Learning*

Modern online learning includes offerings that run the gamut from conventional method or using textbook-like information delivered over the Web to Internet-based collaborative role-playing in social simulations and highly interactive multiplayer strategy games. Examples include primary-grade students working on beginning reading skills over the Internet, middle school students collaborating with practicing scientists in the design and conduct of research, and teenagers who dropped out of high school taking courses online to attain the credits needed for graduation. The teachers of K–12 students may also participate in online education, logging in to online communities and reference centers and earning in service professional development credit online.

One of the basic characteristics of online course is its goal. whether the activity serves as a replacement for face-to-face instruction (e.g., a virtual course) or as an enhancement of the face-to-face learning experience (i.e., online learning activities that are part of a course given face-to-face). This distinction is important because the two types of applications have different objectives. A replacement application that is equivalent to conventional instruction in terms of learning outcomes is considered a success if it provides learning online without sacrificing student achievement. If student outcomes are the same whether a course is taken online or face-to-face,

then online instruction can be used cost effectively in settings where too few students are situated in a particular geographic locale to warrant an on-site instructor (e.g., rural students, students in specialized courses). In contrast, online enhancement activities that produce learning outcomes that are only equivalent to (not better than) those resulting from face-to-face instruction alone would be considered a waste of time and money because the addition does not improve student outcomes. A second important dimension is the type of learning experience, which depends on who (or what) determines the way learners acquire knowledge. Learning experiences can be classified in terms of the amount of control that the student has over the content and nature of the learning activity. In traditional didactic or expository learning experiences, content is transmitted to the student by a lecture, written material, or other mechanisms. Such conventional instruction is often contrasted with active learning in which the student has control of what and how he or she learns. Another category of learning experiences stresses collaborative or interactive learning activity in which the nature of the learning content is emergent as learners interact with one another and with a teacher or other knowledge sources. Technologies can support any of these three types of learning experience: Expository instruction—Digital devices transmit knowledge. Active learning—the learner builds knowledge through inquiry-based manipulation of digital artifacts such as online drills, simulations, games, or micro worlds. Interactive learning—The learner builds knowledge through inquiry-based collaborative interaction with other learners; teachers become co-learners and act as facilitators. This dimension of learning-experience type is closely linked to the concept of learner control explored by Zhang (2005). Typically, in expository instruction, the technology delivers the content. In active learning, the technology allows students to control digital artifacts to explore information or address problems. In interactive learning, technology mediates human interaction either synchronously or asynchronously; learning emerges through interactions with other students and the technology. The learner-control category of interactive learning experiences is related to the so-called “fifth generation” of distance learning, which stresses a flexible combination of independent and group learning activities. Researchers are now using terms such as “distributed learning” (Dede 2006) or “learning communities” to refer to orchestrated mixtures of face-to-face and virtual interactions among a cohort of learners led by one or more instructors, facilitators or coaches over an extended period of time (from weeks to years). Finally, a third characteristic commonly used to categorize online learning activities is the extent to which the activity is synchronous, with instruction occurring in real time whether in a physical or a virtual place, or asynchronous, with a time lag between the presentation of instructional stimuli and student responses. Table 1 below presented the conceptual framework for online learning.

**Table 1**  
**Conceptual Framework for**  
**Online Learning**

<b>Learning Experience Dimension</b>	<b>Synchronicity</b>	<b>Face to Face Alternative</b>	<b>Face to face Enhancement</b>
<b>Expository</b>	Synchronous	Live, one-way webcast of online lecture course with limited learner control (e.g., students proceed through materials in set sequence)	Viewing webcasts to supplement in-class learning activities
	Asynchronous	course taught through online video lectures that	Online lectures on advanced topics made available as a

		students can access on their own schedule	resource for students in a conventional class
<b>Active</b>	Synchronous	Learning how to troubleshoot a new type of computer system by consulting experts through live chat	Chatting with experts as the culminating activity for a curriculum unit on network administration
	Asynchronous	Social studies course taught entirely through Web quests that explore issues in U.S. history	Web quest options offered as an enrichment activity for students completing their regular social studies assignments early
<b>Interactive</b>	Synchronous	Health-care course taught entirely through an online, collaborative patient management simulation that multiple students interact with at the same time	Supplementing a lecture-based course through a session spent with a collaborative online simulation used by small groups of students
	Asynchronous	Professional development for science teachers through “threaded” discussions and message boards on topics identified by participants	Supplemental, threaded discussions for pre service teachers participating in a face-to-face course on science methods

Based on data the writer conclude that Online learning applications can be characterized in terms of (a) the kind of learning experience they provide, (b) whether computer-mediated instruction is primarily synchronous or asynchronous and (c) whether they are intended as an alternative or a supplement to face-to-face instruction.

### ***Corona Virus Pandemic Reshape Education***

Luthra and Mackenzie (2020) said that corona virus related disruption can give educators time to rethink the sector, in addition technology has stepped into the breach and will continue to play a key role in educating future generations. In a world where knowledge is a mouse-click away, the role of the educators must change too. Not since world war II have so many countries around the world seen schools and educational institutions go into lockdown at around the same time and for the same reason. While we know that the impact of this virus will be far reaching, what might it mean the longer term for education?

For a while now educators around the world have been talking about the need to rethink how we educate future generations. This might just be the disruption that the sectors needed to get us all to rethink how we educate, and question what we need to teach and what we are preparing our students for. So as we educators grapple with a new way of communicating with our students away from our classroom and lectures theatres, it is a good time to reflect on how this disruptive crisis can help us define what learning should look like for generations Z, alpha and beyond.

The majority of students in educational institutions are from generation z, a generation who is grown up in truly globalized world. This generation, the oldest of whom are now 25 years old, is likely to be reflecting on their education as a result of truly global pandemic, with many facing cancelled exams, sporting event and even graduation. This generation is defined by technology, where the terms FOBA (Fear of Being Alone) and FOMO (Fear of Missing Out) express their expectation of instant communication and feedback, effected trough apps like instant messenger, Snapchat and whatsApp. That includes from parent and educators, something being amplified with the current remote learning.

In the mid of covid-19 crisis, the fellow educators are wondering about what we need to be preparing for our students in the future. According to a Dell Technologies [report](#), 85% of the jobs in 2030 that Generation Z and Alpha will enter into have not been invented yet. According to this World Economic Forum [report](#), 65% of primary-school children today will be working in job types that do not exist yet.

Education sector is one of the fields which is influenced by this pandemic. According to OECD data, in Denmark, Slovenia, Norway, Poland, Lithuania, Iceland, Austria, Switzerland and the Netherlands, over 95 % students reported having a computer to use for their work. But only 34% in Indonesia did. From the data, we can imagine that it's not easy to apply online learning in our country. But the condition forces the teachers to do so. Schools face are difficult choice if the educators don't teach remotely all of the students miss out on month of curriculum, if they do, a sizeable group of already disadvantage students will be left out and will fall even further behind.

Luthra and Mackenzie (2020) said that there are four ways that covid-19 could reshape how we teach future generations. They include educating citizen in interconnected world. Here, they said that Covid -19 is a pandemic that illustrates how globally interconnected we are-there is no longer such a thing as isolated issues and actions. Successful people in the coming decades need to be able to understand this interrelatedness and navigate across boundaries to leverage their differences and work in globally collaborative way. It's also redefining the role of educator. The notion of an educator as the knowledge holder who imparts wisdom to their pupils is no longer fit for the purpose of a 21 st century education. With students being able to gain access to knowledge, and even learn a technical skill, trough a few clicks on their phones, tablets and computers, we will need to redefine the role of the educator in the classroom and lecture theatre. This may mean that role of educators will need to move towards facilitating young people's development as contributing members of society. Next, teaching life skills is needed for the future. In this global pandemic era, young people need resilience and adaptability skills that are proving to be essentials to navigate effectively through this pandemic. There are three important skills which are needed namely creativity, communication and collaboration alongside, empathy and emotional intelligence and being able to work across demographic lines of differences to harness the power of the collective through effective teamwork. The final reshape is unlocking technology to deliver education. The pandemic of this covid-19 virus has resulted educational institutions to create content for remote learning for students in all sectors. Educators across the world are experiencing new possibilities to do things differently and with greater flexibility resulting in potentials benefits

in accessibility to education for students across the world. These are new modes of instruction that have previously been largely untapped particularly in the kindergarten to grade 12 arena.

### ***Kinds and Advantages of Online Learning***

The internet has made online learning possible, and many educators are interested in online learning to improve and enhance students ability and learning target while battling the shortage in resources, facilities and equipment particularly in higher education Institution. According to Castro and Tumibay (2019), Online learning has become popular because of its potential for providing more flexible access to content and instruction at any time, from any place. It is imperative that the educators and researchers consider, and examine the efficacy of online learning in educating students.

The corona virus pandemic forces the educators and students to teach and study at home in order to slow the spread of the disease. Basically online learning is an educational concepts which implementing information technology for the process of teaching and learning. Using online learning in pandemic of this disease can prevent the spread of this virus.

Online learning which is popular with e- learning is another form of teaching. It is a distance learning system where the internet access is used to support the educators to teach their students. There are many kinds of online learning offered to be used by educators.

From some sources, the writer resumes three types of online learning namely, Synchronous online learning/ Live. In this type communication between students and educators happen instaneous and the member can get to the information in the meantime. One of the advantages of this type is that offers instant feedback of the student's performance. It also quickens the formation of teaching group for booting a more elevated amount of connection to empower better understanding of a specific subject. The best thing about this type is that is empowers more noteworthy inclusion of the members. The weaknesses of this type are that it is simply the way that it doesn't manage self learning and planning. Also, it requires administration of student's accessibility at different time zone. The examples for this type are video/sound conferencing and virtual classroom.

The second type is Asynchronous online learning this is called store and forward online learning where the communication between the educator and students doesn't happen instantaneously. It is self manage course for example presenting messages on different discussion gathering and trading email. This type offers accommodation, availability and self guided learning. The weaknesses of this type are the student may feel isolated or less persuaded because there is no open door to cooperate with others.

Bernard et.al (2004) found advantages for asynchronous over synchronous distance education. In examining a different set of studies, Zhao et al. (2005) found that studies of distance-learning applications that combined synchronous and asynchronous communication tended to report more positive effects than did studies of distance learning applications with just one of these interaction

The third type is Blended online learning. With different name it's also called blended learning method, a blend of regular up close and personal addresses, workshops and instructional exercises' with learning online by using messaging, discussing, discussion sheets, quizzes, tests and declaration. The benefits of this type that the students get their feedback from online quizzes and test which cause them to identify provisos in their knowledge and ways to fill them. Zhao et al. (2005), also found (a) advantages for blended learning (called "Face-to-Face Enhancement" over purely online learning experiences and (b) advantages for courses with more instructor

involvement compared with more “canned” applications that provide expository learning experiences. Thus, the three dimensions capture some of the most important kinds of variation in distance learning and together provide a manageable framework for differentiating among the broad array of online activities in practice today.

### ***Strategies to improve Online Teaching when University is Closed***

Online course have become an incredibly popular way in teaching. Teaching an online course require different way with traditional classroom. So it is very useful for the educators to adapt or develop their skills to teach online. There are many strategies to improve online learning environment when university is closed in the era of corona virus pandemic. Cooper (2016) clarified five strategies to improve online teaching. They are:

#### 1. Engage with the learners online

Without the educator presence in the classroom, it is important that you establish a virtual presence start from the beginning of the course and for the duration of the course in order to maintain good learning environment. By doing so, both the students and educators would be visible and available. The educator also be welcoming the students to their new learning community as in any traditional classroom.

#### 2. Create a supportive learning environment

As an online educator, you have an opportunity to create supportive environment for the learners. Encouraging both educator and students engagement and student- to- student interaction is the best way to achieve this. The strategies are : Firstly, at start of online course, get the ball rolling with a personal introduction post, encourage participants to contribute their own bio or introduction to the group. Secondly, create an open forum or discussion where learners can post to request help and assistance from each other, developing peer-to-peer support. Thirdly, set up small groups, similar to traditional study groups, for supportive mentoring fellow learners. These strategies will encourage learners to work together as an active learning community, which brings benefits to all individual involved.

#### 3. Used a Mix of Learning Tools for Better Engagement

The best online educators used synchronous and asynchronous method, creating a blend of traditional learning styles with newer, more collaborative and visual tools. Working with a mix or blended activities makes the content more interesting and exciting, increasing student’s engagement with both educator and other learners.

#### 4. Provide ongoing feedback

Feedback is very essential component of all effective learning- including online. The feedback will help to create learning experience that is informative, engaging and motivational for the learners. Feedback should be continuous during the learning process. With constructive feedback offered as soon as possible so that the students can clearly identify which behavior or skills need to be improved. The educators could give group feedback through collaborative exercises which also help to promote peer engagement.

#### 5. Make e-learning content mobile

Mobile learning holds key advantages for learners, allowing them to access up to-date course materials and relevant content anywhere, anytime. With bite sized pieces of any information available to be digested quickly and easily. Learners can work through course materials at their own pace, assisting both performance and productivity. Make sure that the content can be easily access via Smartphones, Laptop, Notebook and IPads to maximize the teaching method. With this strategy the educator can feel more confident about his online teaching skills and materials.

### *Is it Effective to Use on Line Learning?*

There are a large number of studies which show the effectiveness of online learning.. Firstly, a study done by Navaro and Shoemaker (2000), this study found that student learning outcome for online learners were as good as or better than traditional learners regardless of background characteristics that the students were greatly satisfied with online learning. Secondly, Rovai and Jordan (2004) examined the relationship of sense community between traditional classroom and the blended format, and they found that students in blended format had a stronger sense of community than the students in traditional format. In a study that compares learning outcomes for students who self-selected into the online format for a macroeconomics course, researchers found that after correcting for sample selection bias, test scores for the online format students were four point higher than for the traditional format.(Harmon & Lambrinos, 2006). In a methodologically rigorous study conducted at Ithaka (Bowen & Ithaka 2012), students were randomly assigned to traditional format (control) and hybrid interactive online learning format that met once a week where students did most of the work online (treatment).The researchers found that there are comparable learning outcomes for both groups and that there was a promise of cost savings and productivity gains over time for hybrid course. Furthermore, these learning improvement and cost saving gains are expected to increase as new tools and software for online learning are being developed and tested continually.

From the result of the study above the writer conclude that using online learning is effective especially for preventing the students not go away from home.

### **CONCLUSIONS**

The high speed of corona pandemic really influences education system in Indonesia. Conventional class which is accustomed to using in the process of teaching and learning starts to be left behind. Online learning which uses internet access becomes popular since it really support learning from home. Using online learning, the educator can help the government to minimize the spread of corona virus. The most important thing that the educators should do is to use variety of strategies to improve online learning. By doing so, it is hoped that the process of teaching and learning by using online course will run smoothly.

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