

# Face-to-Face and E-Learning: Lessons Learned from the Forced Shift to E-Learning during the COVID-19 Outbreak

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The COVID-19 pandemic outbreak is not only affecting human health, it is also affecting other aspects of human life. In the education sector, the recommendation of health authorities in many countries has forced the education sector to find an alternative to face-to-face delivery methods. In this critical situation, the smooth and easy alternative to face-to-face education is distance learning. Distance learning or e-learning has increasingly gained popularity in higher education. Even though e-learning is a hot topic, e-learning is still more of a supplement to education in normal conditions. During the COVID-19 outbreak in Indonesia, almost all universities in Indonesia are delivering lectures through e-learning. This is a good opportunity to find out student's perceptions of e-learning. This study aimed to see what students like and dislike about e-learning and what their preferences are after experiencing un-intentioned e-learning. A qualitative study using questionnaires as an instrument was conducted with University Students at 4 campuses in Greater Jakarta, Indonesia. They were asked to answer questions about their e-learning experiences, what they like, and what they dislike. One hundred and fifty-three questionnaires were analysed. The findings of the study showed that things that students like about e-learning were the flexibility; that it can be done anywhere; is easy, less time consuming and relaxing. The things that they dislike were an unstable internet connection; unclear lecture delivery; less interaction with lecturers and friends; and the inability to ask a question in detail or to have a discussion. Most students still preferred face-to-face learning compared to e-learning. This study contributes to e-learning literature. This study also contributes to e-learning practice.

**Keywords:** *COVID-19, E-learning, Students' Perception.*

## Introduction

At the end of 2019, COVID-19 was beginning to spread worldwide. Rapidly it became a pandemic. This worldwide outbreak does not only have an impact on human health, but it also impacts other aspects of human life, including the education sector (Huang et al., 2020). In many countries, the recommendation of health authorities forced the education sector to find an alternative to face-to-face delivery methods. In the case of disruption, the learning process should be undisrupted (Huang et al., 2020).

The one best and easy alternative is to change from regular face to face classes to online classes. The distance learning method may be the best option for students in a forced situation (Basilaia et al., 2020). "School's Out, but Class is on" is the campaign of the Chinese government during the COVID-19 epidemic. This COVID outbreak has incidentally increased the awareness and adoption of currently available technology in education (Goh & Sandars, 2020). Understanding student's assessment of e-learning is critical to predicting the effectiveness of e-learning. During the COVID-19 outbreak in Indonesia, almost all universities in Indonesia are delivering lectures through e-learning. Almost all students and lecturers are experiencing the e-learning process. The mobility restriction because of the COVID-19 pandemic can be good timing to review students' perceptions about e-learning.

The growing ubiquity of the internet and further evolution of the internet has given a new option for students in pursuing their education (Pham et al., 2018). E-learning, as a new method in teaching, is gradually being used in education at all levels. E-learning has become more popular now. Universities are now moving their focus to have more web-based methods in delivering education material (Pham et al., 2018). A survey in the US in 2015 showed that the number of students taking online classes is increasing from 3.7% to 3.9%. One in four students takes at least one online course a year. Sixty percent of academic leaders consider that e-learning will be important for long term growth (Chakravorti, 2019)

Even though e-learning is a hot topic, e-learning is still more of a supplement to education (Zhou et al., 2020). It is understood that e-learning gives both students and universities, however, the major concern of the distance learning method is the quality and the effectiveness of the learning process. This study wants to see what students like and dislike about e-learning after they experience unintended e-learning. Since most of the students initially have no intention of e-learning, it is interesting to know what their preference is after experiencing both traditional face-to-face methods and e-learning.

## Literature Review

### *E-learning*

E-learning is an internet-enabled teaching method. E-learning is a formal approach to learning where students and lecturers interact indirectly using internet-based infrastructure (Pham et al., 2018). E-learning is also known as online learning and distance learning. E-learning is defined as "*learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access*" (Huang et al., 2020). E-learning is seen as "*an innovative approach in delivering education services through the electronic platform to advance knowledge, skills, and other learning outcomes. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students*" (Singh and Thurman, 2019) (Huang et al., 2020).

The growing ubiquity of the internet and further evolution of the internet has given a new method option for a student in pursuing their education (Pham et al., 2018). E-learning, as a new method in teaching, is gradually being used in education at all levels. With the advance of technology, learning can be maximised to provide high-quality courses that give students options of time, place, pace and the experience of different learning experiences (Huang et al., 2020).

E-learning has become more popular now. Universities are now moving their focus to have more web-based methods in delivering education material (Pham et al., 2018). A survey in the US in 2015 showed that the number of students taking online classes is increasing from 3,7% to 3.9%. One in four students takes at least one online course in one year. Sixty percent of academic leaders consider that e-learning will be important for long term growth (Chakravorti, 2019). Experts have predicted that the 'residential based model' of learning will disappear in the near future (Shachar & Neumann, 2010). There are many indications that e-learning will keep proliferating as many other internet advanced applications are used in the process (Pham et al., 2018).

E-learning offers benefits both to universities and students. The benefits for universities include a substantial cost savings related to the investment of physical teaching and learning infrastructure. It also helps the universities to contribute to a digital and knowledgeable society. It also helps universities in providing global education services. For students, e-learning provides education which is not limited by time and space. It can be done at home, at work, or anywhere via computers or mobile devices. It gives students more options, flexibility and convenience. E-learning students can control the pace and rhythm of their study.

However, the major concern of the distance learning method is the quality and effectiveness of the learning process. There are four domains of course work delivery: (1) student attitude and

satisfaction, (2) interactions of students and faculty, (3) student learning outcomes, and (4) faculty satisfaction (Shachar & Neumann, 2010). With lack of interaction and direct communication, the satisfaction and effectiveness of e-learning might not be achieved.

E-learning system quality is known to be the most important dimension of overall e-learning service quality (Pham et al., 2019). E-learning method heavily depends on technology. Perceived ease of use is an important determinant for satisfaction and intention to continue studying (Dwidienawati et al., 2020; Hsu, 2014; Roca et al., 2006; Shao, 2020). Another important factor in system quality is connectivity. The other major drawback of e-learning is the overdependence of technology. They need a good internet connection. At the same time, a complicated program will also be an obstacle to an effective online lecture (Basilaia et al., 2020). Most e-learning studies were conducted in developed countries, where connectivity is good and the price of technology is cheap. In a developing country, such as Indonesia, unstable connectivity can influence students' satisfaction, and this can be one of the obstacles of e-learning success.

The other major concern is the effectiveness of e-learning. The ideal effectiveness of e-learning should be the evaluation of the academic performance of the student. The available studies prove that e-learning is effective. There are no significant differences in course scores, student engagement, and student satisfaction between online and offline learning methods (Manion, 2019). This claim is proven by the majority of academic research (Chakravorti, 2019). A meta-analysis of 125 studies also indicates that distance education not only is comparable to the traditional face-to-face method but also, can outperform traditional instruction (Shachar & Neumann, 2010). Regardless, the result of the studies on the effectiveness of e-learning, and that it is a hot topic, show that e-learning is still more of a supplement to education (Zhou et al., 2020). The majority of students still prefer face-to-face learning methods.

COVID-10 outbreak does not only give an impact on human health, but it is also impacting other aspects of human life, including the education sector (Huang et al., 2020). In many countries, the recommendation of health authorities forced the education sector to find an alternative to face-to-face delivery methods. In the case of disruption, the learning process should be undisrupted (Huang et al., 2020).

The one best and easy alternative is to change from regular face to face classes online. The distance learning method may be the best option for students in a forced situation (Basilaia et al., 2020). "School's Out, but Class is on" is the campaign of the Chinese government during the COVID-19 epidemic. This COVID outbreak has incidentally increased the awareness and adoption of currently available technology in education (Goh & Sandars, 2020). E-learning offers advantages including efficiency, flexibility and convenience (Chakravorti, 2019). It

allows students to study anywhere, anytime. Students can easily access the lecture material and it does not require any commuting (Basilaia et al., 2020).

However, studies show that interaction and communication between students and teachers are important factors for student engagement and performance. Student-instructor interaction is one of the most important factors of student perceived learning and e-learning satisfaction (Marks et al., 2005). Timely response and feedback also increases satisfaction (Holsapple & Post, 2006). E-learning is a lack of those factors compared to the offline method. Therefore, interaction and responsiveness play important role in e-learning satisfaction.

Intention for e-learning has been known to be an important determinant of successful e-learning. In this study, all the students are regular students who were forced to shift to e-learning due to mobility restrictions to prevent the spread of COVID-19.

Research questions of this study:

With the forced shift to an e-learning situation, are the student satisfied with the e-learning experience?

What do they like about e-learning?

What don't they like about e-learning?

Which learning method do they prefer?

## **Material and Method**

During the COVID 19 outbreak in Indonesia, almost all universities in Indonesia are delivering lectures through e-learning. Almost all students and lecturers are experiencing the e-learning process. The mobility restrictions due to the COVID-19 pandemic can be a good time to review students' perceptions about e-learning. This study was a descriptive qualitative study. Questionnaires were used as the instrument. To understand the student satisfaction level and the perception of e-learning which has been forced upon them, a survey was conducted in March 2020. To rate satisfaction level, respondents needed to self-rate the 3 statements on e-learning which include a useful learning experience, e-learning has met my expectation and overall satisfaction with e-learning using a 6-point Likert scale. There is no mid-point used on the rating to avoid a centre tendency. To understand the perceptions of respondents about e-learning, open questions such as “what do you like/dislike about e-learning and why” were asked. The questionnaire also required additional demographic information about the respondents.

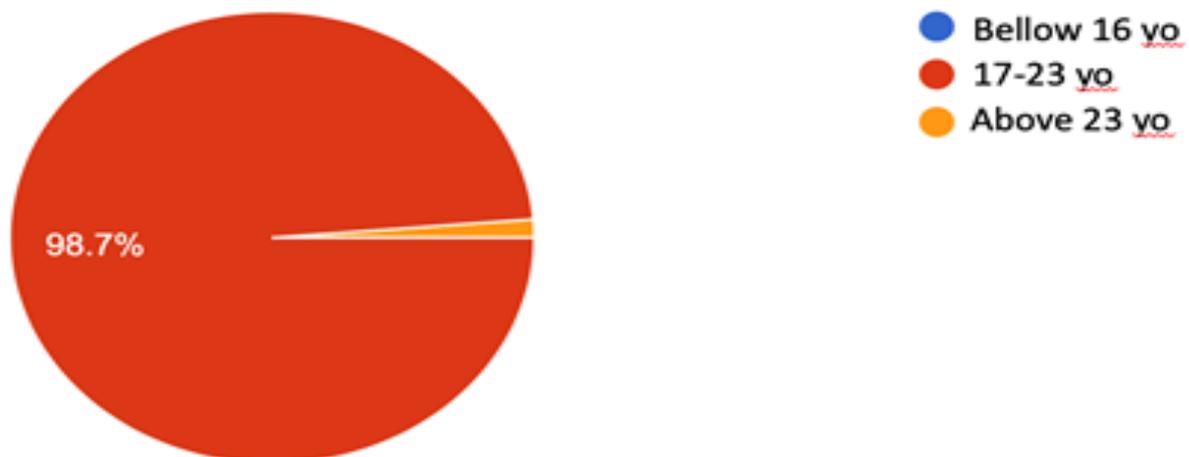
The survey was conducted to students at 4 universities as respondents. Those universities were one in Bogor, one in Jakarta, and two in Tangerang, Indonesia. All students were originally regular face-to-face students who were forced to shift to the e-learning method due to the

COVID-19 outbreak. Those students previously did not have any intention to do online learning.

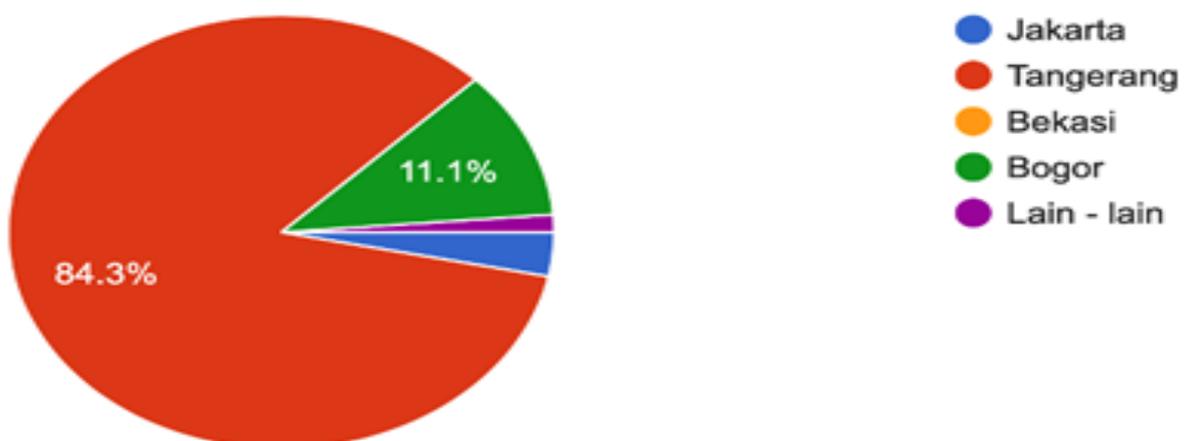
## Results and Discussion

One hundred fifty-three questionnaires were eligible for further analysis. From 153 respondents 99% were between 17-23 years old (Figure 1). There were 61% male, 37% female, and the remaining chose not to answer. Almost 84% were from the campus in Tangerang and 11% were from Bogor (Figure 2). Eighty percent of the respondent were in 1st-2nd semester and 11% were a 3-4th semester (Figure3). Sixty-seven percent of students originated from Greater Jakarta and thirty-three persons were from other locations in Indonesia (Figure 4).

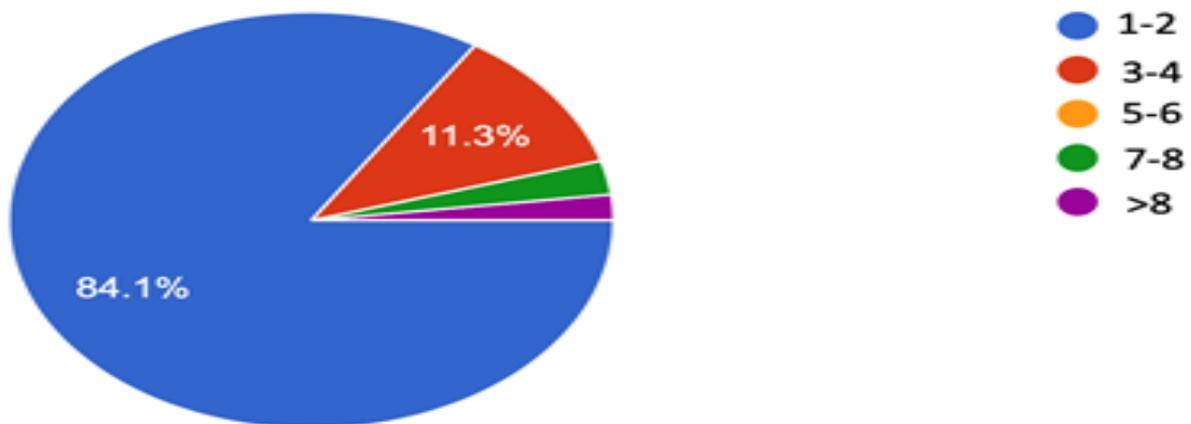
**Figure 1.** Age of Respondents



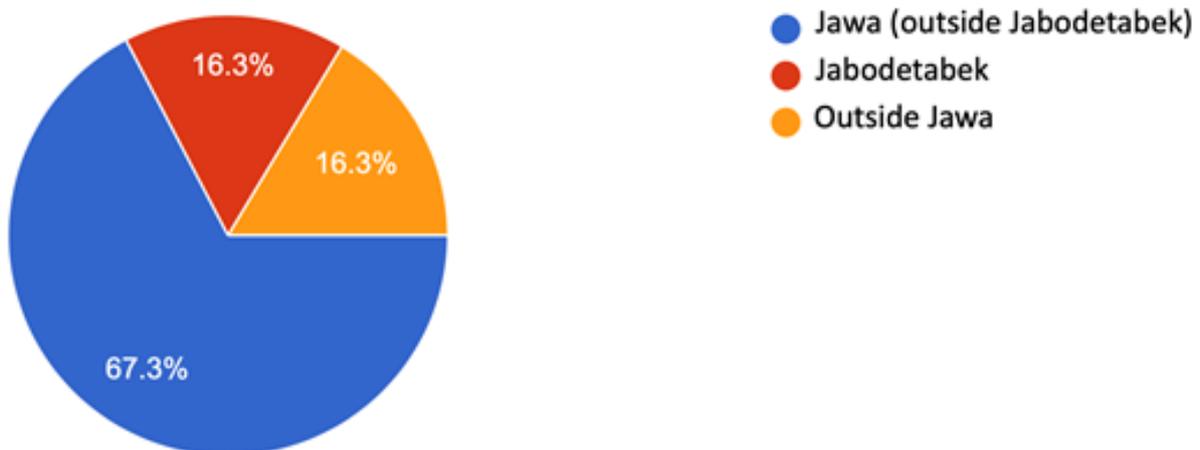
**Figure 2.** Campus Location



**Figure 3.** Class Semester

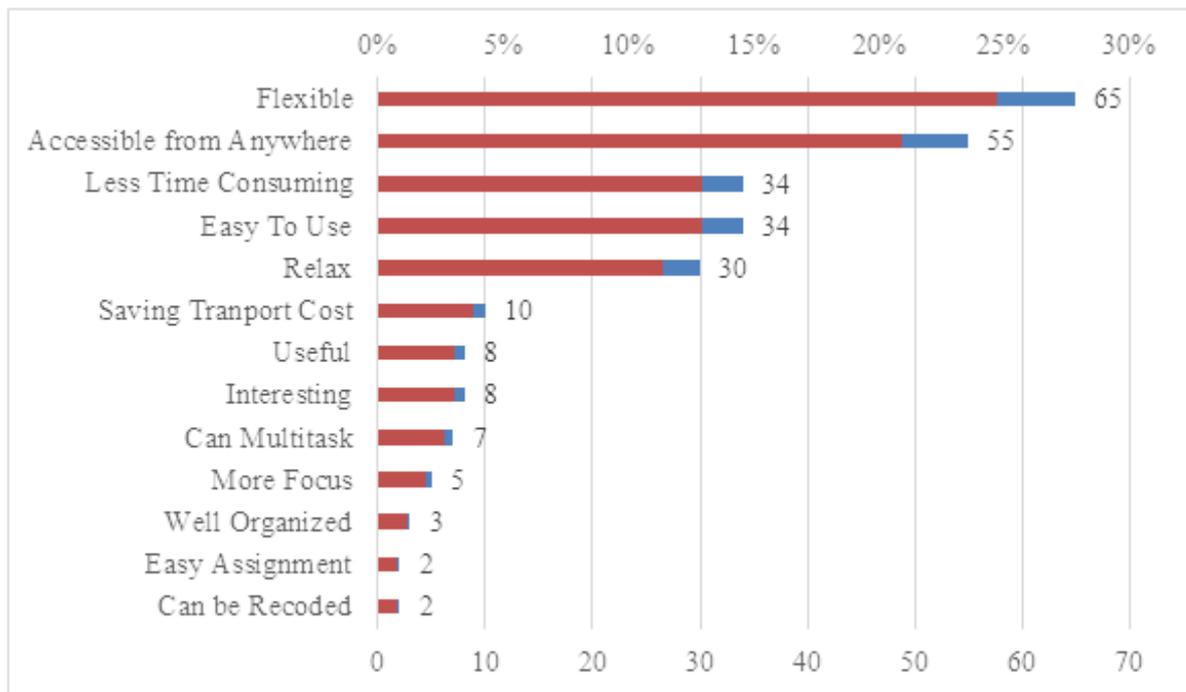


**Figure 4.** Hometown



From 3 statements to rate satisfaction level which include the statements “e-learning is a useful learning experience”, “e-learning has met my expectation” and “overall satisfaction”, the mean score was 4.0 and standard deviation 1.11. It meant that all respondents only slightly agreed that they were satisfied with the e-learning experience.

**Figure 5.** What Students Like About E-Learning



The most likable thing about e-learning was its flexibility. Sixty respondents or 25% mentioned flexibility. "Flexible time; it can be done at home; the assignment was easier". The second most likable thing was that e-learning can be accessible from anywhere (55 mentioned or 21%). Followed by e-learning was less time consuming, it was easy to use, and it was more relaxing (Figure 5). Savings cost, use, and can multitask were also reasons why respondents liked e-learning. Table 1. shows other answers that were collected from the questionnaires.

**Figure 6.** What Students Do Not Like about E-Learning

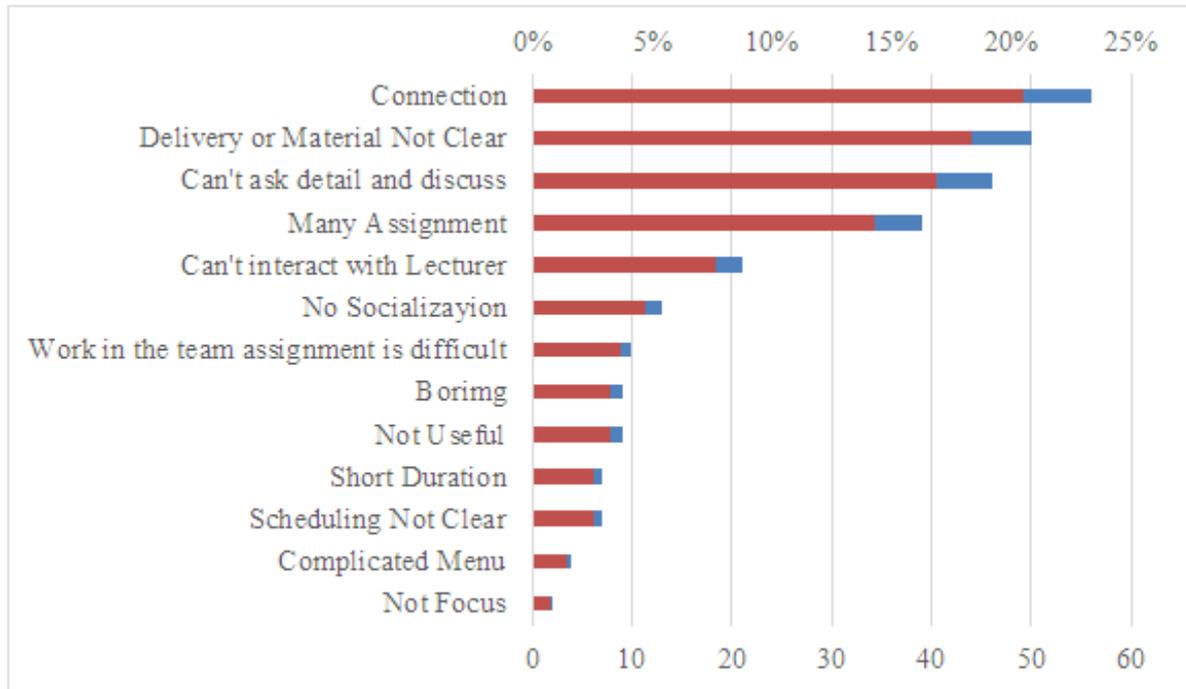


Figure 6 shows the rank of items that students dislike about e-learning. Students claimed that internet connection was the biggest drawback in their e-learning process. "*Internet connection is not good; the material conveyed is more difficult to understand; it uses more internet connections*". Around 50 respondents complained about internet issues and it accounted for 20% of the total items that they did not like about e-learning. The second issue was teaching delivery. In terms of teaching delivery, they mentioned several issues. First, because of the connectivity students could not hear the content of the lecture. Second, they felt it was hard to understand if they did not see the lecturer directly. Because the lecturers did not see nonverbal communication, they did not have any clue that students did not understand. The third one was the technology literacy of lecturers which could interrupt the class session. The fourth one was that they could not ask a detailed answer to a question. Assignment, teamwork, and interaction were also items that they did not like about e-learning. Tables 1 and 2 show respondents' statements about what they liked and disliked.

**Table 1:** What Students Like About E-learning

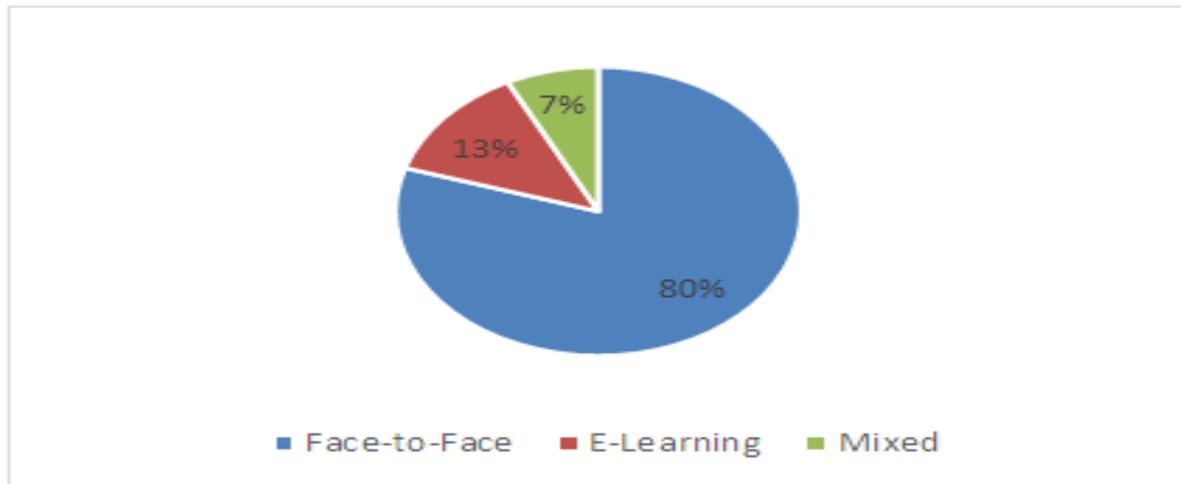
Its flexible; it can be done at home; the assignment given is easier
I have more spare time; I do not have to go to campus
It is more flexible; I can have more time to review the answers of the assignment
Saving money; no need to buy gasoline to go to campus: do not have a preparation, I can be online directly via cell-phone / laptop; class duration is shorter than F2F
I can study and learn at home; I have plenty of time to work on assignments and it is more relaxed
I have more time to learn other things; I have time to find out more about problems that form discussion topics; I have more time to explore the other developments that I am interested in
Flexible hours, fast learning, always updated
It is easily accessible, anywhere, anytime; it is flexible, and the application and program are easy to understand
There is no fixed schedule; I do not have to travel and come to campus; the material is delivered to my house; the session is straight the point (no worries); I don't have to wait (sometimes the lecturer comes late not on schedule)

**Table 2:** What Students Don't Like About E-Learning

I cannot interact socially; I can miss other information that is usually obtained from campus; It is very difficult to learn lessons if you don't meet lecturers directly.
Internet connection is not good; the material given is more difficult to understand if I do not see directly; it uses more internet connection
The internet connection is sometimes unstable making it more difficult to understand; the unscheduled session, so I have to stand by.
It is not similar with attending a lecture (like self-learning); I can't meet friends; e-learning isn't as interactive as face to face classes
Sometimes the delivery is unclear; it is very difficult to do a group assignment or project if we do not meet.
Servers that are sometimes slow; I feel I get more assignment than the face to face session; to be able to understand the session, I need a good internet connection
I feel it is less informative; I require a good internet connection; it is difficult to do group assignments
The atmosphere is not motivating, I have to look at the computer / cell phone screen for a long time; my eyes are tired: session is shorter therefore the explanation is not as detailed; after session I have to read the material again.

However, when asked "after experiencing e-learning, which one do you prefer? Face to face or e-learning?". Eighty percent of respondents still preferred to have face-to-face learning. Only 13% chose to have e-learning and 7% said that they want to have a mixed method (Figure 7).

**Figure 7.** Face-to-face or E-Learning



All respondents were only slightly satisfied with the e-learning experience. From a scale of 1-6, they only rated 4 on average. This is understandable because all of the respondents are also students who are originally regular students from university. Because of the COVID-19 outbreak, they were forced to attend e-learning classes. Most of them did not have the intention of e-learning. The condition has forced them to shift to e-learning. However, still, it was 4. It meant they were satisfied enough.

This study showed that students liked e-learning flexibility, accessibility, a relaxed atmosphere, and the opportunity to have more spare time to do other activities. The respondents liked the experience of e-learning. They liked how flexible it was. They did not have to wear formal clothes. They had more free time. They were also able to multitask. Unlike in the classroom, where the use of gadgets during class is limited, e-learning allowed them to still check their gadgets frequently. They also liked that they did not have to travel. It was less time consuming and less traveling cost. It also meant more free time and spare money. Being unmonitored was also relaxing for them.

All respondents in this study were from Generation Z. Generation Z is the generation born between 1995 and 2015 (Bassiouni & Hackley, 2014; Koulopoulos & Keldsen, 2014; Töröcsik, 2014; Tulgan, 2013). Most of them are still in the transition of high school to more dependent university students. Generation Z is known for its convenience and relaxation. They are also the ultimate multitasking generation. Forty percent of them use smartphones or tablets while watching TV (Pollak, 2020). With those characteristics, no wonder the experience of e-learning

is interesting. They like being not in a rush and to relax and at the same time, they do not have to focus on doing one thing at a time.

Although Generation Z spends most of their time in front of an electronic screen, they stay socialised. Generation Z likes constant and immediate feedback. Therefore, they felt unhappy to have a restriction on mobility. They did not like the lack of inter-activeness of e-learning. They did not like how it limited their interaction with lecturers and friends. They also disliked the idea that they had to study by themselves. In fact, that they preferred to have a face-to-face sessions confirms the statement from Schawbel (2014) that they prefer the traditional method of communication.

Generation Z is known to have a fairly high degree of confidence (Ozkan & Solmaz, 2015). However, (Tulgan, 2013) states Generation Z is less optimistic compared to Generation Z and cautious. They also know that they are clueless about a lot of things (Tulgan, 2015). Therefore, they still need direction. They still need authority to support them and from time to time they are not sure what to do.

This study also reveals that 20% of respondents prefer to have mixed methods of learning. Therefore, if the e-learning program can focus on things that they like and diminish what they do not like, the program may attract them.

## **Conclusion**

The COVID-19 pandemic outbreak is not only affecting human health, but it is also affecting other aspects of human life, including the education sector. In many countries, the recommendation of health authorities forced the education sector to find an alternative to face-to-face delivery methods. The distance learning method may be the best option for students in a forced situation. Even though e-learning is a hot topic, e-learning is still more of a supplement to education in normal conditions.

This study shows that flexibility, accessibility, perceived ease of use, inter-activeness, and connectivity are the most concerning things in e-learning. However, internet connection, lack of inter-activeness and the feel of being isolated are the major drawbacks of e-learning which are still to be addressed. This study can give insight that in order for e-learning to be successful, a combination of both e-learning and face-to-face learning can be a better option to addresses some of the concerns of e-learning.

The limitations of this study are the small number of respondents, the diversity of respondents and that it could only be conducted by questionnaires. Further study with a large number and



more diverse respondent needs to be explored. Study to dig deeper into students' perceptions on e-learning should also be explored.

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