Online Learning Experience During the COVID-19 Pandemic : University Students' Perspectives

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Abstracts

The aims of this research were (1) to study online learning experience and its effectiveness in the perspectives of Thai University students during the pandemic, (2) to identify factors affecting online learning experience of Thai University Students during the Pandemic, and (3) to explore correlation between online learning effectiveness and experience of Thai University students during the pandemic. Online survey had been employed to gather the data. Data was processed and analyzed using descriptive: frequency, percentage, mean, and standard deviation, as well as inferential statistics: One-way ANOVA with LSD and Pearson correlation to answer the research objectives.

This research found that in general, Thai university students perceived that the online learning experience during the pandemic is acceptable, yet it has less effective compared to the on-site. The most common online teaching method employed by universities are using online meeting platforms. The most popular ones are Google Meets and Zoom meeting. However, there are a few universities that provides multiple platforms to the lecturers and students to choose based on their preferences and these groups of students seem to have a better experience. Age range, educational level, household income and faculties are personal factors affecting the online learning experience, while online learning platform is the only method of delivery that affect the online learning experience. The results could also imply that undergraduate students have different online learning experience to the postgraduate students. Finally, it has also found that online learning experience has a positively correlated to effectiveness of the outcomes. Therefore, if the university would like to improve the effectiveness of the outcomes, they shall consider provide better learning experience to the students.

Keywords: Online Learning; COVID-19 Pandemic; University Students' Perspectives; Learning Experience

Introduction

Thailand is the first country to detect a case of Covid-19 outside China in January 2020, however, it was under control, very few cases from aboard, no domestic spreading yet (World Health Organization, 2020 : 65). But the government had educated and encouraged people to protect themselves by washing hands and wearing masks. The first wave of the Covid-19 pandemic spiked around March 2020 when there was locally transmitting that cannot identify the patient zero or its origin throughout 77 provinces. State emergency was declared on March 26th and Thai government had announced the first curfew from April 3rd, just before Songkran festival of the year 2020. Under the state emergency decrees, no on-site learning and teaching are allowed, all universities were forced to adopt online learning as a method of delivery until the end of the semester, which was about 2-4 weeks. However, the online examinations were

tough and led to questions of integrity and fairness. Schools and universities were re-open in July 2020. The situation was better, some people had slipped off their guards, the second wave started in December 2020, in Bangkok, Chiang Mai and Rayong, yet it was under control (Wipatayotin, 2021 : online). The third wave, Thailand had been attacked by the Alpha strain or known as the UK strain, it was heavily spreading around Bangkok and surrounding provinces, Cholburi, Sakeao, and several other provinces. Restrictions were implemented in these red zones. The third wave stared around May this year, the situation was not yet relief, the fourth wave have started with the entering of the Delta strain in the south of Thailand. The situation is getting worse to the worst. The government has announced another curfew in Bangkok to prohibit the unnecessary move of people from 8 pm to 4 am next day, closed public areas, no dine-in restaurants, department stores are closed in red zones, etc. The curfew has been started from 12th July to 31st July 2021 in 10 provinces including Bangkok. However, universities and educational institutions have not been allowed to have on-site classes since the third wave, April 2021.

The current situation is not so good in Thailand and the world; however, our children need to study. Online learning may seem to be the only option. So, there are questions arrived, is it really a good option or to what extent can it be improved, what do the students think about online learning, it is effective, if not what should be improved.

Thinking of students as customers of the universities, student experience is particularly important toward their actions in the classes (Kotler, Kartajaya, & Setiawan, 2017 : online; Susiva & Vadhanapanich, 2020 : 56) Online learning poses advantages and limitations that lecturers need to be aware off and design classes that utilize the most of those advantages and minimize the effects of the limitations to the classroom Mukhtar et al. (2020 : online)

Therefore, the researcher would like to understand online learning experience and its effectiveness in the perspectives of Thai university students, identify factors affecting the online learning experience, as well as explore the correlation between the online learning experience and effectiveness of the outcomes. The results of this research shall help the researchers, lecturers as well as stakeholders to re-designed curriculums, programs and course structures that answering students' requirements and delivering better experience to the students, which shall return with a more effective way of teaching and learning during the COVID-19 pandemic since no one knows when the pandemic will end, especially in Thailand where new cases and deaths has been increasingly reported every day (Department of Disease Control, 2021 : online) so it is better to put the effort to deliver the better experience and perhaps reaching a more effective way of online learning

Research Objectives

1. To study online learning experience and its effectiveness in the perspectives of Thai University students during the pandemic.

2. To identify factors affecting online learning experience of Thai University Students during the Pandemic.

3. To explore correlation between online learning effectiveness and experience of Thai University students during the pandemic.

Research Methodology

To achieve the objectives, survey research was designed and gathered all relevant data using online questionnaires.

1. Population and Sampling Design

1.1 Population of this research are those students who are studying in Thai universities across countries both undergraduate and postgraduate students. There are 1,522,999 undergraduate students, and 138,925 postgraduate students in 2020 (Office of the Higher Education Commission, 2021 : online). Therefore, total population for this research is 1,661,924 students who are attending higher education in the formal system.

1.2 Sample size was calculated using the formular of Taro Yamane (Yamane, 1967:45) with 95% confidential level, the result was 384 respondents. Hence, 400 sets of questionnaires were obtained to ensure completeness of the data. Non-probability Opt-in panels sampling method was employed i.e., the questionnaire was developed using an online survey platform and then created and posted the link on various websites and social medias that Thai university students are commonly visited (Schindler, 2005 : 7)

2. Questionnaire Design

To reach the objectives, online questionnaire was developed to gather all necessary data. The questionnaire was divided into two parts with a screening question to ensure that the respondents are university students. The first part asks about students' behaviors, experience, and effectiveness of online and on-site learning system during the pandemic; the second part is asking the respondents demographic data. The first part consists of 21 closed-end questions: some are nominal scale; many are Likert scale, and two open-ended questions. The second part contains seven questions asking mainly on their demographic data such as age range, household monthly income, faculty, etc. The latter mainly relied on nominal and ordinal scales. Prior to distribution, the questionnaire was validated for consistency and reliability.

3. Data Collection

Questionnaire was developed on a well-known online survey platform, which allows the researcher to create a link to post into various websites and social media platforms. The link was also shared to their students by a few university lecturers across Thailand. Students participated in this research on the voluntary basis, no specific link nor university names were asked to ensure the privacy and anonymity of the respondents. The data collection period was between June 5th to June 30th, 2021, stopped when reached 400 answers. Once the data collection completed, the platform automatically performed summary of each question using descriptive statistics, verified the completeness of the data and screened out non-university students' answers. The data then ready for download for further analysis.

4. Data Analysis

Data was downloaded and input into a statistical analysis software to process and analyze the data using descriptive statistics and inferential statistics. Descriptive statistics employed are frequency, percentage, mean, mode, and standard deviation to explain the students' perceptions toward online learning experience. Inferential statistics used are independent sample t-Test and one-way ANOVA to understand factors effecting online learning experience, Pearson correlation is also used to study the relationship between effectiveness and online learning experience of Thai university students (Mark Easterby-Smith, 2018 : 23 ; Schindler, 2005 : 7)

Conceptual Framework

To understand the online learning experience during the pandemic based on Thai university students' perspective, extensive literatures, research papers and articles have been reviewed and a conceptual framework has been drawn as shown in figure 1.
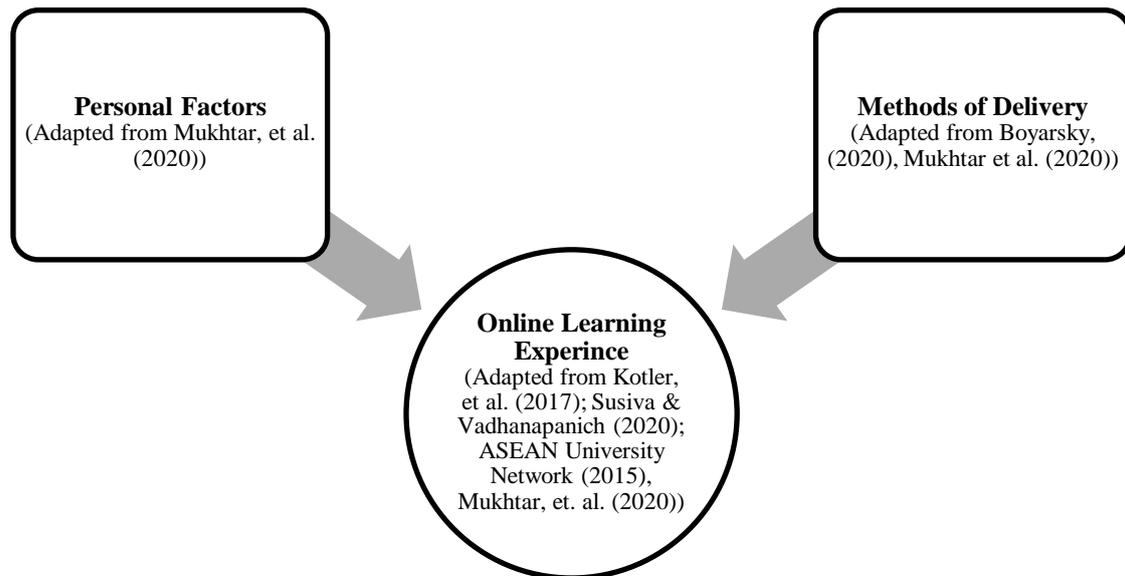

Figure 1 Conceptual Framework

The pandemic has caused changed teaching methods from on-site to completely online during the lockdown period. In delivery online courses, there are a few platforms that are available and selected by Thai Universities such as Zoom, Google Meets, Microsoft Teams, and WebEx (Boyarsky, 2020 : 34) Different universities or lecturers may use different online conference platforms depends on their convenience. However, there are pros and cons of online learning. The benefits of online learning are remote learning, comfort, accessibility, while the limitations are involved with inefficiency and difficulty in maintaining academic integrity Mukhtar et al. (2020 : online). Mukhtar et al. (2020 : online) also found that online learning has allowed lecturers to develop student centered learning, which is the key advantage of this method of delivery. On the other hands, for limitations, online learning is not good for teaching skills especially for labs like anatomy classes, lack of students' feedbacks, limited attention span, lack of attentiveness, resource intensive, lack of discipline, and plagiarism Mukhtar et al. (2020 : online)

Personal factors studied in this research are gender, age range, educational level, faculties, and household income that could affect the online learning experience of the students especially faculties they are studying, educational level, and household income. Different faculties, students study different subjects. Contents and course structures are different, which are designed particularly to educate students with the best delivery teaching methods Mukhtar et al. (2020 : online)

Many universities in Thailand using AUN-QA Assessment to perform the self-assessment and write reports annually. The AUN-QA consists of 11 criterions, which are (1) expecting learning outcomes, (2) program specification, (3) program structure and content, (4)

teaching and learning approach, (5) student assessment, (6) academic staff quality, (7) support staff quality, (8) student quality and support, (9) facilities and infrastructure, (10) quality enhancement, and (11) output (ASEAN University Network, 2015 : 87). Higher education institutions in ASEAN countries should have followed these criterions to ensure that their curriculums are reaching the standard as well as identifying gaps for continuously improvement. This research is then using the AUN-QA criterions as a measurement for students' online learning experience.

Results

   The online survey took about 25 days for 400 complete sets of data, after that the data was downloaded and analysed using statistical software. Respondents of the research were mostly female (71.5%), age around 18-24 years old (82.6%), studying undergraduate level (79.3%) from 13 different faculties and schools both art and science, household income 20,000 – 49,999 Baht a month (32.8%). Furthermore, the respondents were mostly pharmacy students (30.5%), business and management students (25.8%), and science students (11%). During the pandemic, most of the universities have changed the teaching methods from on-site to completely online (64.8%). There are several universities that have changed their teaching methods from on-site to online in some courses (22.3%). There are also some universities that provide online teaching since the pre-pandemic (7.3%). Hence, since the pandemic has started, over 94.4% of the respondents have experienced with online teaching and learning in the higher education level.

   The results can be summarized according to the objectives as follows:

   1. Online learning experience and its effectiveness in the perspectives of Thai University students during the pandemic.

   The findings shown that online learning experience had been improved since the pre-pandemic because online video meeting platforms have offered better features and functions that lead to improve the user experience. The most common online video meeting platforms employed by Thai universities as an online learning channel are Google Meets (57.8%), Zoom (28.5%), Microsoft Teams (8%) and WebEx (1.3%). There are other platforms the students mentioned, yet they are not commonly used. Google Meets is the most popular as it is free of charge as a part of the Google services, yet students need to have Gmail accounts to conveniently access the platform. Zoom comes as the second because it has no cross-platform issues, however, it has limitation on the length of time for a meeting on their free services. The usage of the Microsoft Teams is slowly increased since it comes with the Microsoft 365 package, and easily links recording to the SharePoint and OneDrive with huge storage space available. WebEx is for more professional online conferences or webinars. Each platform has its own pros and cons for online learning experience and effectiveness. However, since the start of the pandemic, these platforms have been improved and offered better functionalities and user experiences to both teachers and students.

   Consider the online learning experience and effectiveness based on the AUN-QA assessment criterions, the first criterion is *expected learning outcomes*, students perceived that they have just sufficient knowledge and discussion times during the online sessions ($\overline{x} = 2.94, SD. = 0.54$) in other words, the expected learning outcomes can be delivered as the expected, but not over expectation. For *program specification*, curriculum and course arrangement are moderately well communicated to the students ($\overline{x} = 2.71, SD. = 0.89$) although the curriculum and program specification remain the same for on-site and online

teaching. Further, in the student's perception, the *programs are somewhat well structured, and the contents* are moderately appropriate for online learning ($\overline{x} = 3.34, SD. = 0.92$). Regarding the teaching and learning approach, the students perceive that the courses are moderately well prepared, and the assignments are moderately helping them to understand the course contents ($\overline{x} = 2.74, SD. = 0.75$). Most of the respondents perceive that *student assessments* have been conducted adequately and fair ($\overline{x} = 2.75, SD. = 0.88$). However, there are 15.5% of the respondents feel that it is inadequate and unfair. Regarding *academic staff quality*, the students perceive that the academic staffs have moderate knowledge and understanding on the subjects they taught online ($\overline{x} = 2.57, SD. = 1.14$). However, they have mentioned that it depends on lecturers and instructors teaching techniques. Some lecturers have insufficient devices and inappropriate environment to perform online teaching sessions. Further, students think that the lecturers cannot answer their questions well as their expected. When students need support from staffs, 60.5% of the respondents said it is somewhat inconvenience to seek for online support. However, there are respondents said that they did not need any support from the staffs during the pandemic (4%). Hence, *support staff quality* is somewhat inadequate and shall be improved ($\overline{x} = 2.78, SD. = 1.13$).

For *student quality and support*, the students perceive that they have got somewhat adequate student monitoring system via class advisors ($\overline{x} = 2.55, SD. = 1.03$). However, there are distancing happen during the pandemic, the students can only contact their advisors via online methods such as Line chat app and email, which may cause slightly delay in responses. Students would like to access to recording of classes for their revisions, some universities did provide to the students, not all. *Facilities and infrastructures*, during the pandemic, the respondents may have limitations in accessing the on-site facilities and infrastructures, yet the result shown that the universities have attempted to provide services and allow students to access the necessary resources quite convenience and adequate ($\overline{x} = 3.00, SD. = 0.66$) as per their expectations, especially online meeting platforms, e-library, e-document, as well as other applications designed and developed to enhance online experience for the students. Regarding the *quality enhancement*, feedbacks, interactions, and participations of the students are limited during the pandemic ($\overline{x} = 2.51, SD. = 0.83$). They perceive that they have less interaction with the lecturers as well as colleagues. When considering, *output* which is the students themselves. This research has asked about the effectiveness of online learning in their perspective. The result shown that online learning is somewhat effective teaching method ($\overline{x} = 2.53, SD. = 0.78$), however, most respondents believe that it is less effective compared to on-site teaching method (67%). Therefore, the effectiveness of online learning may not be as good as on-site.

Overall online learning experience of Thai university students is just **fair** ($\overline{x} = 2.76, SD. = 0.29$). further, when asking the respondents if the situation is back to normal, which teaching methods are preferred. The answers are somewhat surprise, 61% of the respondents preferred the hybrid teaching method, which is mixture between online and on-site. On-site is much preferred for courses that teach skills, calculations, practices, workshops, and laboratory sessions. While online is for those lecture-based subjects e.g., marketing, economics, so on. Moreover, 31.5% of the respondents preferred completely on-site as they believe that on-site provides better experience and more effective teaching and learning especially in terms of participation, discussion and interpersonal communications with lecturers and classmates too. Networking and socialize are missing when study online. However, there are 7.5% prefer online learning, almost the same with the number of respondents who have studied online prior to the pandemic (7.3%). Only, 0.2% increased.

2. Identify factors affecting online learning experience of Thai University Students during the Pandemic.

One-way ANOVA with LSD is used to test at the 95% confidential level to identify factors affecting online learning experience of Thai University Students during the COVID-19 Pandemic. It found that age range (F = 8.332, Sig = 0.000), educational level (F = 5.989, Sig = 0.001), household monthly income (F = 2.2341, Sig = 0.041) and faculties (F = 2.731, Sig = 0.002) are the personal factors significantly affecting online learning experience of Thai University students, while online meeting platform (F = 3.413, Sig = 0.009) is the only methods of delivery that affects their experiences. Students at age 18-24 years old ($\overline{x} = 2.78, SD. = 0.27$) are having distinct experience to the one with age 25-34 years old ($\overline{x} = 2.62, SD. = 0.33$). For educational level, undergraduate students ($\overline{x} = 2.78, SD. = 0.27$) have different experience to the Master degree students ($\overline{x} = 2.62, SD. = 0.33$). It is noticeable that students with age of 18-24 years old are undergraduate students, and the one with 25-34 years old are studying the Master degree. The former has slightly better experience than the latter. For household monthly income, there are three pairs that have different online experience, the first pair is students with household income less than 20,000 Baht a month ($\overline{x} = 2.78, SD. = 0.25$) and students with household income between 50,000 – 99,000 Baht a month ($\overline{x} = 2.69, SD. = 0.31$). The second pair is students with household income between 20,001 – 49,999 Baht a month ($\overline{x} = 2.79, SD. = 0.25$) and students with household income between 50,000 – 99,000 Baht a month ($\overline{x} = 2.69, SD. = 0.31$). The last pair is students with household income between 20,001 – 49,999 Baht a month ($\overline{x} = 2.79, SD. = 0.25$) and students with household income between 100,000 – 199,000 Baht a month ($\overline{x} = 2.69, SD. = 0.28$). The respondents studying in deferent faculties or departments have different online learning experiences. Business and Management students ($\overline{x} = 2.72, SD. = 0.28$) have significantly distinct experience from Nurse ($\overline{x} = 3.22, SD. = 0.12$), Engineering ($\overline{x} = 3.01, SD. = 0.25$), Logistic and Marine Training ($\overline{x} = 3.10, SD. = 0.03$). Science ($\overline{x} = 2.75, SD. = 0.24$) students have significantly dissimilar experience from Nurse ($\overline{x} = 3.22, SD. = 0.12$), Logistic and Marine Training ($\overline{x} = 3.10, SD. = 0.03$), and Education ($\overline{x} = 2.59, SD. = 0.17$). IT and Innovation students ($\overline{x} = 2.79, SD. = 0.29$), and Pharmacy students ($\overline{x} = 2.79, SD. = 0.30$) have significantly distinct experience from Nurse ($\overline{x} = 3.22, SD. = 0.12$), and Education ($\overline{x} = 2.59, SD. = 0.17$). Nurse students ($\overline{x} = 3.22, SD. = 0.12$) have significantly different experience from Social Science ($\overline{x} = 2.83, SD. = 0.41$), Economics ($\overline{x} = 2.61, SD. = 0.37$), Medicine ($\overline{x} = 2.70, SD. = 0.00$), Education ($\overline{x} = 2.59, SD. = 0.17$), Law ($\overline{x} = 2.88, SD. = 0.19$), and Arts ($\overline{x} = 2.37, SD. = 0.00$). Economics students ($\overline{x} = 2.61, SD. = 0.37$) have significantly dissimilar experience from Engineering ($\overline{x} = 3.01, SD. = 0.25$), and Logistic and Marine Training ($\overline{x} = 3.10, SD. = 0.03$). Engineering students ($\overline{x} = 3.01, SD. = 0.25$) have significantly unique experience from Education ($\overline{x} = 2.59, SD. = 0.17$). Logistic and Marine Training ($\overline{x} = 3.10, SD. = 0.03$) have significantly distinct experience from Education ($\overline{x} = 2.59, SD. = 0.17$), and Arts ($\overline{x} = 2.37, SD. = 0.00$). Lastly, Education students have significantly dissimilar experience from Law ($\overline{x} = 2.88, SD. = 0.19$).

Methods of delivery is the other independent variable that found affecting the online learning experience of the student during the pandemic. Different *online meeting platform* employed by the universities or lecturers creates different online learning experience to the students. Each platform has found to delivery significantly distinct experience. Other platforms ($\overline{x} = 3.32, SD. = 0.00$) provide the best experience compared to Google Meets ($\overline{x} = 2.77, SD. = 0.27$), Zoom ($\overline{x} = 2.73, SD. = 0.29$), Microsoft Teams ($\overline{x} = 2.73, SD. = 0.30$),

and WebEx ($\overline{x} = 2.50, SD. = 0.34$). The other platforms refer to the mix used of the various platforms available in the market. For example, some universities provide Google Meets, Zoom and Microsoft Teams for students and lecturers to choose per their convenience. Some lecturers have adopted two different platforms to teach one class to ensure that students have appropriate access to various contents such as video sharing, games, online learning applications.

3. Explore correlation between online learning effectiveness and experience of Thai University students during the COVID-19 pandemic

The research results indicated that online learning experience have a positively correlated to effectiveness of outcomes ($r = 0.305$, Sig = 0.000). Therefore, it can be concluded that in the student perspective, learning experience they perceived have a moderately correlated to effectiveness of their learning outcomes. In other words, the better experience the students perceived with the online learning, the more effective learning outcomes they will have.

Discussion

There are interesting findings in this research that the researcher would like to discuss further as follows.

1. This research is conducted amidst of the COVID-19 pandemic to understand the student perspectives on online learning experience. the findings shown that the students have been forced to adopt online learning to replace the on-site for safety reasons. However, once they have experience with the online learning platform, it seems that they have adapted themselves to the new online system quite well. They have learnt that online and on-site both have pros and cons. The advantages of the online are convenience, accessibility, they can study from anywhere, recordings available for revision, which is consistent with the finding of Mukhtar et al. (2020:online). However, online learning also has disadvantages, which are limited interactions, participations, discussions, losing networking and relationship building among the classmates, difficult to transferring skills, practicing, or conducting workshops. These limitations are quite like what Mukhtar et al. (2020:online) found in their research, except this research has found that a few courses may not be suitable with online learning especially courses that need actions, practices, team works, and discussions such as laboratory, workshops, programming, calculation, and group discussions. Students in different faculties have distinct perspective on online learning experience, however, they are having an acceptable level of online learning experience.

2. Furthermore, it is noticeably that students in faculties that are usually have practices, laboratory sessions are facing with more challenges with online learning. Since most lecturers have employed an available online meeting platform to perform live lectures with limited demonstrations and discussions. Although these online meeting and conference platforms have been improved extremely fast compared to prior of the pandemic, there are several limitations that are remain challenges. To improve online learning experience, the result suggested that the universities and lecturers shall employ a hybrid between online and on-site to ensure the effectiveness of the outcomes. For online session, lecturers may also consider mixing between different online meeting platforms to draw student attention as well as to be able to utilize different teaching tools and techniques that come with each platform to increase online learning experience.

3. It seems that online learning experience is positively correlated to effectiveness of the learning outcomes because curriculums and program structures are designed in assuring that it will deliver the standard quality of teaching and learning, and the universities have changed only the method of delivery from online to on-site. The fact that all curriculums did not specifically design for online learning, the students perceived that on-site learning offers the better learning experience and effectiveness shall be acceptable. However, if the universities, schools, or faculties would like to continue with the online learning method, either offer a hybrid or completely online courses, they shall design the curriculum, course structures, teaching tools and techniques that could offer similar or better experience and effectiveness to the students.

4. In designing the online courses, lecturers shall be well prepared with course structures, assessments, academic and pragmatic knowledge, online teaching tools and techniques to draw student attention and foster interactions and participations. The most importantly, all the advantages of online learning experience shall remain and utilized as benefits for students especially recording for student revisions.

Recommendations

According to the research results, the students have already adopted and familiar with online learning system. Government, universities, faculties as well as other stakeholders may consider adopting available digital technology to develop as EdTech to improve online learning experience and effectiveness.

The curriculum committees shall consider redesigning their curriculums and course structures to be more appropriate for the pandemic situations by accepting online meeting platform or online learning application as alternative to on-site lectures. Further, the assessment methods should also be redesigned to ensure integrity and fairness of scoring and grading.

Google Meets and Zoom are the top two online meeting applications in the students' perceptions. Both offers somewhat good online learning experience. On the other hands, WebEx is the least preferrable for the students.

Class contents is another thing to be considered as if it needs practicing, actions, discussions, workshops, etc., lecturers may need to think more on the best way to delivery those contents to the students and ensure that they will understand and gain those necessary skills that are particularly important to their future careers.

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