Thai University Students' Perceptions of Online Education after Extended Period of Emergency Remote Education

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Abstract

For over 2 years, the Covid-19 pandemic forced large numbers of Thai students to engage in emergency remote education, but with the pandemic abating and students returning to face-to-face classrooms, this paper takes the opportunity to examine students' feelings about their experience with online education. The aims of this research are thus to investigate students' perceptions of their university's preparedness and its provision of ongoing support for online learning, the quality of the online teaching, the advantages and disadvantages of online classrooms, the students' technological self-efficacy, and their preferred mode of learning when the pandemic abates. The results reveal that students' overall satisfaction with the university's preparedness and support was at the moderate level, while the quality of online teaching and students' technological self-efficacy were rated at the high level. In terms of the advantages and disadvantages of online education, the latter outweighed the former. The students' preferred mode of learning after the end of the pandemic was face-to-face classrooms, followed in order by blended learning, and then fully online classrooms. The findings suggest that factors including the lack of university life experiences, an absence of classroom interaction, health problems, and heavy workloads could hinder the adoption of fully online classrooms.

Keywords: Emergency Remote Education, Perception, Information Technology

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INTRODUCTION

When Covid-19 was first confirmed in December 2019, no one could have anticipated its impact, and for over 2 years, the spread of the disease has sustained a global public health crisis. The pandemic not only brought economic activity to a halt around the world, it also left governments with no option but to impose national lockdowns, enforce social distancing measures and in some cases, implement curfews as they struggled to slow the spread of the disease. This had an immediate effect on the public and private sectors as they tried to adjust to this new reality. In Thailand, the government declared a state of emergency on 26 March, 2020, and following this, a partial lockdown was announced with restrictions on movement, nighttime curfews, and the enforcement of state quarantines. In the education sector, the announcement of a national lockdown led to school closures, delayed reopenings, reduced class sizes and most importantly, a transition to remote learning that meant that schools and universities then pushed teachers and students to teach and study online. In Thailand, the outbreak coincided with the summer holiday and so schools and universities were lucky in that they had 2-3 months to prepare their ICT infrastructure, test their systems and train teachers and staff on how to transition from face-to-face to online or virtual education.

The initial experience with online learning in Thai schools and universities was not an unmitigated success and during the first wave of Covid-19 in July 2020, a national outcry ensued over the accessibility and quality of online learning. It was found that many students were not able to use online facilities due to a lack of access to technology which not only resulted in a loss of learning opportunities, but also highlighted the deeper digital divide that separates schools in cities and in rural areas (Oxford Policy Management, 2020). In addition, while the strength of online education lies in its flexibility which allows students to access lessons at their own time and pace, online classes in Thailand tend to replicate lecture-based classrooms that require students to sit through scheduled lessons all day, increasing screen time for students and limiting their movement. Because students have been engaged in online classes, classroom interactions and activities between teachers and classmates have been dramatically reduced, and this may have increased students' anxiety, while undermining their motivation and performance. A study by Jiang, Yan-Li, Pamanee and Sriyanto (2021) which examined the level of depressions, anxiety and stress during the pandemic revealed that of all 385 Thai university students in the study, 33.2% of students were under stress, 47% suffered from anxiety, and 46.2% from depression.

It should be noted that while the transition to online education in Mid-2020 was both unprecedented and took place in a remarkably short period of time, the move was expected to be only short-term as the Thai government was at that time successful in controlling the number of new infections. Thus, at the start of the second semester in October 2020, many schools and universities resumed onsite learning with precautions in place to guard against the spread of Covid-19, these including temperature checks, enforced mask-wearing, reduced class sizes, and the installation of makeshift cubicles in classrooms. However, a resurgence in Covid-19 infections forced many schools and universities to move back to distance learning in early January 2021. The return to online learning prompted concerns that this disruption would have long-term impacts on students' learning and development and, at the same time, the reintroduction of online education meant that schools and universities would have to address the learning deficits caused by this. The situation worsened later in 2021, when in April, the country faced the Delta-powered third and most severe wave of infection and then a fourth wave in mid-August. During this period, the government's policy on school closures, in-person learning and online classes varied in its degree of enforcement. Thus, during the first and second wave of the pandemic, the government encouraged a switch to online classes to minimize the spread of the disease, but once 85% of teachers and students had been vaccinated, the government allowed schools and universities to decide for themselves if they wished to switch to onsite teaching, stay with online learning, or adopt a combination of both.

From the first wave of Covid-19 in 2020 to the fourth wave in 2021 and continuing into 2022, Thai students have spent over 20 months having their learning disrupted by school rescheduling and the flipping between online and in-person learning. At the same time, teachers have been tasked with

giving academic and emotional support to their students as well as providing distance learning for all during full and partial school closures, and whether they wanted to or not, both teachers and students have been fully immersed in an online learning environment for nearly two years. At the same time, we have seen a clear rise in the number of schools and universities offering online education, either 'blended' or completely online, and changes in the perception of online learning may persist through the post-pandemic period.

Against this backdrop and because students are the most important stakeholders in the education system, this research attempts to investigate university students' attitudes towards online learning during the Covid-19 pandemic. The participants comprised first-, second- and third-year English major students enrolled at a provincial university in Thailand.

Purpose of the Present Study

The study aims to examine three aspects of students' attitudes toward online learning:

1. At the institutional level, the study aims to investigate students' views regarding the university's preparedness and provision of ongoing support for online-learning during the Covid-19 pandemic;

2. At the classroom level, the study aims to reveal the characteristics of online classrooms and the quality of teaching provided via online lessons; and

3. At the personal level, the study aims to explore students' attitudes towards online classrooms in comparison with face-to-face tuition, students' self-efficacy in terms of technology, and their preferred mode of learning when the pandemic abates.

The study rests on the assumption that at the onset of the Covid-19 pandemic, when students were robbed of their familiar face-to-face classrooms with all their tables and desks, classmates and teachers, textbooks and worksheets, and the routines that come with this, they might initially feel anxious and skeptical but over time, as they gained momentum. learnt how to use the new technology, and overcame the learning barriers, students' attitudes towards online learning might have become more positive. However, if after over two years, students' responses showed that the prolonged use of online lessons was burdensome and had led to higher levels of exhaustion and anxiety, interventions might be needed to create a more favorable learning environment.

Literature review

Prior to the outbreak of Covid-19, the adoption of online learning and information communication technology (ICT) was moving forward within Thai educational institutions, albeit only slowly and sporadically, but the pandemic acted as both a catalyst for a sudden shift in education and a test of the effectiveness of online education. Because education plays a pivotal role in producing a high-quality workforce, the Thai education system has the lead role in fostering student creativity and in building community networks that facilitate learning for innovation through partnerships and the use of technology. According to Ngampornchai and Adams (2016), e-learning and information communication technology has become an important part of the national effort to improve public education, as well as acting as a pathway to education for students who are unable to access higher education directly. In addition, several studies show that the general attitudes of Thai students towards the use of ICT in classroom and online education are reasonably positive.

A study by Bhatiasevi (2011) found that Thai students expressed a willingness to use e-learning systems and showed satisfaction towards e-learning materials, while a study by Teo et al. (2011) that explored students' attitudes towards e-learning at three public universities in Thailand found that participants had an above-average level of acceptance. Olivier (2017) reported in his study of Thai students' attitudes toward learning English through e-learning that approximately 60% of his

research participants have a positive attitude towards this, while a study by Chomphuchart (2017) regarding Thai university students' attitudes on the use of the internet to learn English revealed that the majority of the participants supported this. It should be noted here that these studies were carried out before the Covid-19 pandemic and reported on exploratory attempts at blended learning approaches that integrated ICT technology and the internet as part of normal lessons, rather than the complete adoption of online learning, as happened during the pandemic. Indeed, according to Todd (2020), the suddenness of the shift to online learning meant that the relevance of previous research investigating moves to online learning was unclear, given that the shift was coerced and unplanned. In light of this, conducting research into the impact of the switch to emergency remote education during the pandemic remains both important and relevant.

Under normal circumstances, developing online education requires that considerable time and resources be put into planning, designing, and making available and accessible the correct learning tools. Students and instructors also need to be guided through these kinds of open educational practices (Bozkurt, 2019a, 2019b), but under the pressure of the Covid-19 crisis, none of this was possible. To better understand the sudden changes in teaching and learning during the crisis, Bozkurt et al. (2020) use the term 'emergency remote education' (ERE) to differentiate between the transformation in educational practices made during the Covid-19 pandemic and more regular distance education. This is necessary because while distance education is used as a generic term for remote, online or e-learning, these terms do not capture what has happened during the period of the pandemic.

For educational institutions, it is important to be clear whether the provision of emergency remote education or of online education is their primary objective, since the instructional design and preparation time required for each is very different. and falsely assuming that the two are the same can lead to the development of bad practices. Hodges et al. (2020) therefore state that the primary objective of emergency remote education is "not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis" (Hodges et al., 2020, Emergency remote teaching section). Once the pandemic abates, it is hoped that schools and colleges will be able to return to regular teaching and learning.

Shortly after the implementation of emergency remote education, researchers worldwide conducted studies to identify the impact of the changing educational landscape on teachers' and students' attitudes. Perhaps not surprisingly, the results differed depending on the institutional context. Doolan et al. (2021) conducted a survey with students studying in Europe in 2020 on their life during the Covid-19 lockdown. The survey covered several topics affecting student life, including academic responsibilities, support networks, emotional well-being, skills and infrastructure required for working from home, life circumstances, and students' adjustment to the lockdown. In terms of academic life, the findings showed that although the majority of students were satisfied with how supportive lecturers had been during the transition to online learning, students reported that their workload was heavier and their performance had worsened since on-site classes were cancelled, reflecting their perceived drop in performance. Also in 2020, Aristovnik et al. (2020) conducted a large-scale study of how students perceived the impacts of the first wave of Covid-19. This revealed that while students were satisfied with the support provided by teaching staff and their university, a lack of computer skills, the higher workload, and problems with focusing during online classes all meant that they felt that their academic performance had not improved in the new teaching environment. The study also revealed the disparity between universities in the developed economies and those in the developing world, where problems related to unpreparedness for emergency remote education and technical infrastructure tend to be significantly more serious, and this then affected students' attitudes.

During Thailand's first wave of Covid-19 in July 2020, it became clear that the transition to online classes was going to be problematic as Thai education system was not prepared to deal with a crisis of this scale. According to Lao (2020), not only were existing online resources for students limited in quality and quantity, but the inability of teachers to incorporate technology into their lesson increased the likelihood that their online lessons would be static and ineffective. Problems with

infrastructure were also substantial since many smaller Thai schools face a severe shortage of basic resources, such as computers, internet access, and IT support. A report by Kenan Foundation Asia (2020) highlighted three consequences of the Covid-19 pandemic on Thai education including educational inequality, ineffective teaching practices and the lack of support for teachers and students. In addition, the sudden shift to online learning without a clear direction or sufficient guidelines left teachers and students feeling confused, alienated and powerless. Thus, the Covid-19 pandemic changed how teachers deliver lessons, interact with students, and assess student learning, while students were suddenly faced with a virtual classroom within which they needed to learn a new way of studying and interacting with their teachers and classmates.

Several studies have been carried out regarding Thai tertiary students' attitudes towards emergency remote education during the first and second wave of the pandemic. Imsa-ard (2020) conducted a study on Thai university students' perceptions of the abrupt transition to online learning during the initial outbreak of Covid-19 and found that after 7 weeks of online education, the majority of students did not think that online learning enhanced the quality of teaching; the instructors could not organise online lessons efficiently; and students preferred face-to-face classrooms to online learning. Another study by Phalitnonkiat et al. (2020) of Thai students' readiness for online learning during the pandemic showed that poor internet connectivity and fewer interactions between teachers and students in online classes may lead to a drop in motivation, while a study by Sukman and Mhunkongdee (2021) revealed that while students accepted that online education was an appropriate course of action during the pandemic, they still preferred face-to-face classrooms. Siriteerawasa (2021) conducted research on the obstacles to online learning faced by Thai university students during the Covid-19 crisis. This identified five major themes: technology, learning and instruction, communication, finance, health, and well-being. Although these studies highlight the challenges of online learning, later studies showed that Thai students had more positive attitudes towards emergency remote education. Nuankaew et al. (2021) conducted research to study students' attitudes and perspectives on online learning at four Thai universities and found that respondents showed a high level of satisfaction towards this. Thanavisuth (2021) looked at the level of acceptance of online classes and discovered that the majority of students found that these were at least somewhat enjoyable. These studies highlight students' positive and negative attitudes towards the transition to emergency remote education, while also showing the gradual change in students' attitudes over the course of the pandemic in 2020 and 2021. As mentioned earlier, the research assumption here is that during the first wave of Covid-19, the abrupt transition to emergency remote education left many students feeling anxious, but once online learning had established itself as part of students' academic life, students then developed a new set of perspectives that led to a change in attitudes. This was indeed found by Unger and Meiran (2020), who showed that students felt less anxious three weeks after the change in their learning system as they gradually become accustomed to online education. Lobos et al. (2022) also examined the expectations and experiences of university students regarding online education through two terms starting in March and September 2020 and found that there were changes in students' attitudes. These were generally negative in March 2020, but they changed to feeling more positive towards online teaching and learning, online assessment, and their self-efficacy by the end of the academic period in September.

The results of these studies reveal that the shift to emergency remote education was a mixed blessing, and while some viewed this as disruptive, others saw it as a new opportunity. The present study therefore focuses on how students at one provincial university responded to the move to emergency remote education. In particular, it looks at students' perceptions of and experiences with emergency remote education, the characteristics of online classrooms, and their technology self-efficacy, as well as investigating how online and face-to-face classrooms compare.

RESEARCH METHOD

Research Framework

Because the transition to emergency remote education requires that the entire institution adapts and adjusts, this research focuses on students' attitudes towards online learning at three levels: the institutional, the classroom, and the personal. Students' attitudes are often regarded as one of the key factors explaining students' learning performance, and because these can change and develop with time, students' attitudes may be linked to their tendency to respond towards learning on a continuum of positive to negative. In addition, because these attitudes can be formed through learning environments and social experiences with others, this research follows the framework laid out by Martin, Budhrani, and Wang (2019). This states that faculty readiness to teach online encompasses the readiness of the university to provide the learning environment and facilities required for online education and the readiness of teachers to deliver classes online. Faculty readiness may be assessed through students' experiences of the university's improved infrastructure, the availability of orientations and on-going training, as well as the provision of technical support by the university, while teachers' readiness may be assessed through students' beliefs regarding the quality of online teaching and an evaluation of the characteristics of this. (Martin, Budhrani, & Wang, 2019).

On the personal level, students' attitudes are formed through various factors including personal traits, self-perceptions, competencies, and interactions with others. Studies on students' attitudes towards online learning have shown that students' technology and internet self-efficacy has an impact on their attitudes, and so this study looks at this with regard to students' use of online learning tools. The study also asked students to compare and contrast their experiences in face-to-face and classrooms, as each type of teaching demonstrates particular aspects that can influence students' attitudes.

Research Participants and Methods

The participants in the study were selected in a non-probabilistic way using convenience sampling and comprised first to third year English majors at a provincial university in the northern region of Thailand. Each of these three years varied in terms of their exposure to online education, and so the third-year students had studied in traditional classrooms in their first year and the first half of the second year. The second-year students had also begun their university life with in-person classes, but the first-year students had not yet experienced face-to-face classrooms at the tertiary level. Students were informed about the purposes of the study, and student confidentiality and other ethical issues prior to the data collection, which was caried out using an open-ended questionnaire. Participation in the research was voluntary. The relevant committee of the English department was informed about the study and approved its procedures.

Due to the Covid-19 restrictions, an online questionnaire was utilized that was distributed via Google Forms. The questionnaires were sent to students in February, 2022, three weeks before end of the second term of the 2021 academic year. Access to the online questionnaire was open for three weeks. The questionnaire was divided into seven parts, with all items relating to research questions. The first part contained demographic questions that asked about gender, years of study, grade point average, prior experience with online education, and types of online education experienced during the pandemic. The second part asked about the level of preparedness and ongoing support provided by the university to the students. The third section measured students' computer and internet self-efficacy, and the fourth asked about the characteristics of students' online classrooms. The fifth section concerned students' opinions of the quality of teaching in online classes, the sixth asked for students' opinions on online education as opposed to traditional classrooms, and the final part asked students to choose their preferred mode of learning once the pandemic had abated. A five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) was used to collect data from the 2nd, 3rd, 5th, and 6th parts of the questionnaire. Multiple choice and checkbox questions were used to collect data from the 1st, 4th and final parts of the questionnaire. Each section also contained

open questions for students to add additional comments or suggestions as desired. Descriptive statistics including mean score, standard deviation (SD) and percentage were used to analyse the data, while written data were analysed using thematic analysis. Mean scores and interpretations for the five-point Likert scale statements are as follows. A mean score from 1.00-1.80 is very low (strongly disagree); 1.81-2.60 is low (disagree); 2.61-3.40 is moderate (neutral); 3.41-4.20 is high (agree) and 4.21-5.00 is very high (strongly agree).

Results

The survey's demographic questions revealed that there were 79 participants in the study, 26 males and 53 females, and of these 24 were first-year students, 30 second-year students, and 25 third-year students. Prior to the Covid-19 pandemic, 57 students had had no experience with online learning, while 25 had. The two main types of learning encountered during the pandemic were 100% online learning and blended learning (mixed online and onsite classrooms).

The second part of the questionnaire asked students about the university's preparedness and provision of ongoing support for online education during the pandemic. The details of the students' answers are given in the table below, and these show that the university's communication with students and the provision of online platforms, facilities, devices, accessibility and IT support were predominantly neutral or at a moderate level. While the high rate of moderate answers indicates that the respondents had neither positive or negative views, it could also be the case that the students did not have enough information to make an informed choice. This was reflected in 52 written answers, which showed that many students did not know that the university had a scheme to loan laptops and tablets to students and that there were internet-enabled rooms available for those who lacked internet access at home. Two other issues featured prominently in students' written comments, namely university policy regarding online education and financial support. Some subjects were taught online and some onsite, but students would have preferred the university to have a clear policy on this and to announce this in advance. As regards financial support, students would have liked the university to reduce tuition fees as they claimed that on the one hand, they hardly used any campus facilities but on the other, they had to shoulder additional expenses, such as paying for internet connections and the printing of documents.

Table 1 University Preparedness and Provision of Ongoing Support for Online Education

Items	Mean	Level	SD
The university gives enough information regarding online learning.	3.44	High	0.94
The university offers students enough training regarding online learning.	3.37	Moderate	1.01
The university offers different online platforms for students.	3.35	Moderate	1.14
The university provides enough classrooms or areas for students who cannot otherwise study online.	3.34	Moderate	1.11
The university offers enough devices (e.g., laptops or tablets) for students to borrow for their online classes.	2.77	Moderate	1.21
The university provides fast internet connections for students who want to study online at the university.	3.23	Moderate	1.10
The university provides sufficient IT help desks to support students with their online learning.	3.18	Moderate	1.17
The university offers sufficient communication channels for online learning (e.g., official channels, websites and Line group chats).	3.41	Moderate	1.21
In general, the university has provided sufficient infrastructure and support for students during the Covid-19 pandemic.	3.20	Moderate	1.07
Total	**3.25**	**Moderate**	**1.13**

The third part of the student questionnaire examined students' self-efficacy with regard to internet technology. It is believed that high technology self-efficacy would support the development of positive attitudes towards online learning, and indeed the findings reveal that students perceived themselves as competent computer users who were able to master the technology and their online learning at a high level. While the students seemed to be able to navigate problems well during their online lessons, the written data showed that the most common technological problems that students

encountered were not related to their own abilities but were generated by external factors, such as slow internet connections, problems with signals, power cuts, broken microphones or cameras, and intrusive noises.

Table 2 Students' Self-Efficacy with Regard to Use of Technology

Items	Mean	Level	SD
I am familiar with online learning technology, such as how to join a class, submit work online, share screens, etc.	3.75	High	1.01
I can comfortably access learning platforms such as Google Classroom and Microsoft Team.	3.81	High	0.98
I can retrieve previous live lessons, pre-recorded lessons or download worksheets without a problem.	3.49	High	1.13
I have the skills needed to search for content or information online.	3.82	High	0.98
I am capable of producing digital content such as images, audio files, PPT slides, video, etc.	3.52	High	1.15
I think I have sufficient technology knowledge to be able to study online.	3.59	High	1.04
Total	**3.66**	**High**	**1.06**

The fourth part of the questionnaire asked students about the characteristics of their online classes in order to gain insights to the common classroom practices of ERE during the pandemic. As seen from Table 3 below, most students learned through synchronous lessons with a set class schedule and required login times, although teachers also uploaded relevant learning materials and made these available to students so that these could be accessed at their convenience. In addition, teachers gave out electronic homework and assignments and organized online examinations. These findings were in line with the European Student Union (ESU) survey (Doolan et al., 2021), the COIMBRA group survey (Gatti et al., 2020), and the global survey by Aristovnik (2020), which showed that synchronous lessons, most often live lectures and real-time video conferences, were the most common approach to remote emergency teaching, as reported by institutions. It should be noted that while synchronous lessons were popular in this context, recording these for students to re-watch was not as popular, and this lack of flexibility meant that students who did not have internet access or who had an unreliable internet connection were more likely to miss their lessons. Although teachers divided classes into smaller groups so that students had a greater chance of participating in online classes, teachers generally did not provide sufficient digital channels for students to discuss their studies outside class. Students also found that the teachers used only a limited range of multimedia materials (e.g., no video, audio or games) in class.

Table 3 Characteristics of Online Classes
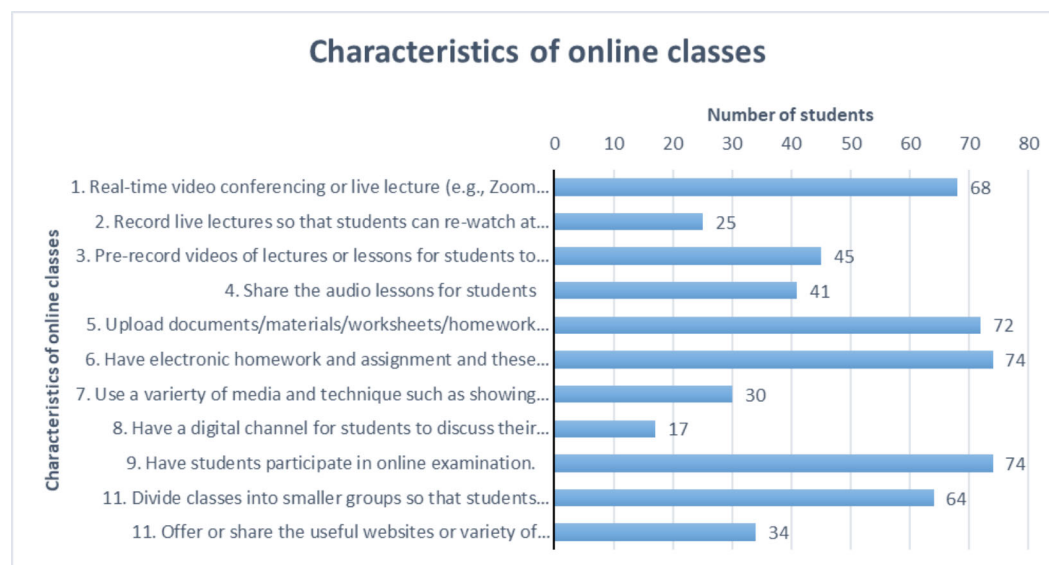
The fifth part of the survey asked students for their opinions on the quality of the teaching that was provided in their online classes. The result from Table 4 showed that students seemed to be broadly satisfied with this because they rated most items at a high level. In detail, while students believed that teachers were capable of using technology in their online classes, providing sufficient content and learning materials, managing the class effectively, and using different types of assessment, they also thought that teachers gave more homework and a greater number of assignments compared to when they taught in-person. They also felt that teachers were not as flexible with online classes as they could have been. The information from the written data further showed that students struggled with issues related to time management, heavy workloads and slow internet connections, and these affected the quality of teaching and learning. Thus, despite giving high scores for individual items, students' overall rating of the quality of their online teaching was only moderate.

Table 4 Quality of Online Teaching

Items	Mean	Level	SD
The teachers are capable of using online technology in their teaching.	3.87	High	0.75
The teachers provide content in an appropriate order.	3.91	High	0.83
The teachers can manage their online class effectively (e.g., duration, class stimulation and class control).	3.71	High	0.89
The teachers use a variety of teaching styles, for example when using different media, organizing online class discussions, and giving presentations.	3.58	High	0.94
The teachers tailor the lesson contents to fit online or interactive formats.	3.73	High	0.85
The teachers provide sufficient worksheets and handouts for students' self-study.	3.84	High	0.89
Teachers allow students to ask questions more often than in traditional classrooms.	3.65	High	0.89
The teachers give more homework and assignments in online classrooms than in traditional classrooms.	3.92	High	1.03
The teachers explain homework or give assignment instructions in more detail in online classrooms than in traditional classrooms.	3.52	High	0.91
The teachers respond to students' answers quicker in online classrooms than in traditional classrooms.	3.41	High	0.83
The teachers are more willing to listen and adjust to students' suggestions regarding content in online classes than in traditional classrooms.	3.52	High	0.88
The teachers use different types of assessment to evaluate students' performance (e.g., presentations, reports, quizzes, etc.)	3.84	High	0.83
The teachers are more flexible in online classes than in traditional classrooms.	3.34	Moderate	0.98
Overall, teachers can teach online classes as effectively as in traditional classrooms.	3.32	Moderate	1.06
Total	**3.65**	**High**	**0.92**

The sixth part of the questionnaire asked students to compare their experience in online and traditional face-to-face classrooms, with the questionnaire written to include questions focused on both the advantages and disadvantages of online classrooms. The first table below shows students' responses to questions related to the benefits of online learning, while the second contains responses to questions on its disadvantages. The results indicate that students' views of the advantages of online learning were predominantly at a moderate level, and although students ranked the benefits of learning autonomy, improvements in their digital skills, and having more time at a high level, their overall view of the effectiveness of online learning was only moderate. In the written data, for which 59 responses were received, students listed lower expenses and the time saved as the major benefits of online learning.

Table 5 The Advantages of Online Learning

Items	Mean	Level	SD
Online classrooms can replace traditional classrooms.	2.80	Moderate	1.10
Online learning is possible with every subject.	2.78	Moderate	1.27
Online learning allows students to have more time to study, as students don't have to commute to the university.	3.77	High	1.17
Online learning reduces the stress of in-person studying.	2.71	Moderate	1.36
Online classrooms are more flexible than traditional classrooms.	3.20	Moderate	1.15
Online learning cuts students' expenses.	3.29	Moderate	1.38
Online learning allows students to be closer to home and improves family relationships.	3.01	Moderate	1.22
Online learning forces students to do more self-study.	3.90	High	0.89
Online learning improves students' digital knowledge and skills.	3.75	High	0.99
Online learning is as effective as studying in traditional classrooms.	2.82	Moderate	1.27
Total	**3.20**	**Moderate**	**1.27**

However, when asked about the disadvantages of online learning, the majority of answers were rated high or very high, in particular with regard to questions on students' inability to enjoy university life, health problems, and difficulties concentrating as a result of spending too much time online. Differences in how students viewed the advantages and disadvantages of online learning suggest that the latter slightly outweighed the former.

Table 6 The Disadvantages of Online Learning

Items	Mean	Level	SD
Online learning reduces the chance to do pair-work, group work and to give class presentations.	3.41	High	1.26
Teachers give more homework and assignments in online classrooms as compensation for not studying in regular classrooms.	3.91	High	1.14
Online learning makes students less motivated and lazier.	3.81	High	1.14
It is more difficult to concentrate in online classes as there are more distractions (e.g., dropped signals, problems with privacy, noise, etc.)	4.08	High	1.06
Online learning prevents students asking as many questions as they do in normal classrooms.	3.44	High	1.13
Online learning reduces students' experience of university life.	4.25	Very high	1.02
Online learning causes students to spend too much time online or to sit in the same position, and this affects their health.	4.43	Very high	0.85
Total	**3.90**	**High**	**1.15**

The last part of the questionnaire asked students to state their preferred teaching mode post-pandemic as well as to rate their overall experience with online learning. Students were asked to choose between three modes of leaning post-pandemic, namely traditional classrooms, blended learning (mixed onsite and online classes), and online classrooms. The findings showed that 47% (37 students) chose traditional classrooms, while 43% (34 students) opted for blended learning. Only 10% (8 students) wanted to carry on with exclusively online classrooms.

Figure 1 Preferred Mode of Learning Post-Pandemic

Preferred Mode of Learning Post-Pandemic

■ Traditional classrooms　　■ Online classrooms　　■ Blended learning
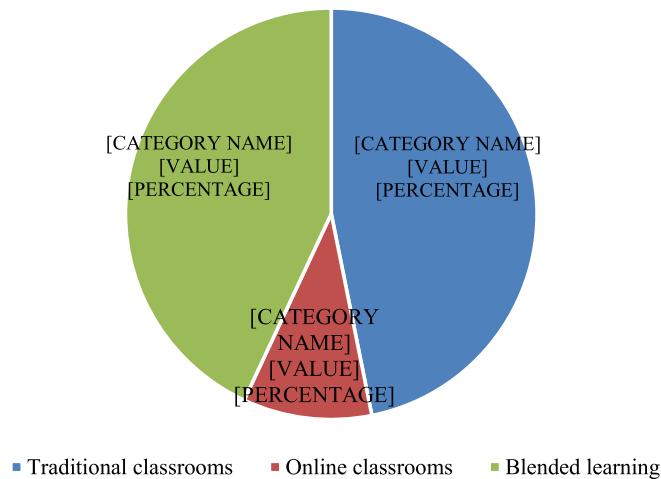
In terms of students' overall satisfaction with having spent over 20 months in emergency remote learning, 46% (36 students) rated this at a moderate level, 20% (16 students) rated it as high, and 11% (9 students) rated it as very high. On the negative side, 13% (10 students) viewed their experience at a low level and 10% (8 students) rated their experience at the very low level.

Figure 2 Students' Overall Satisfaction with Online Learning
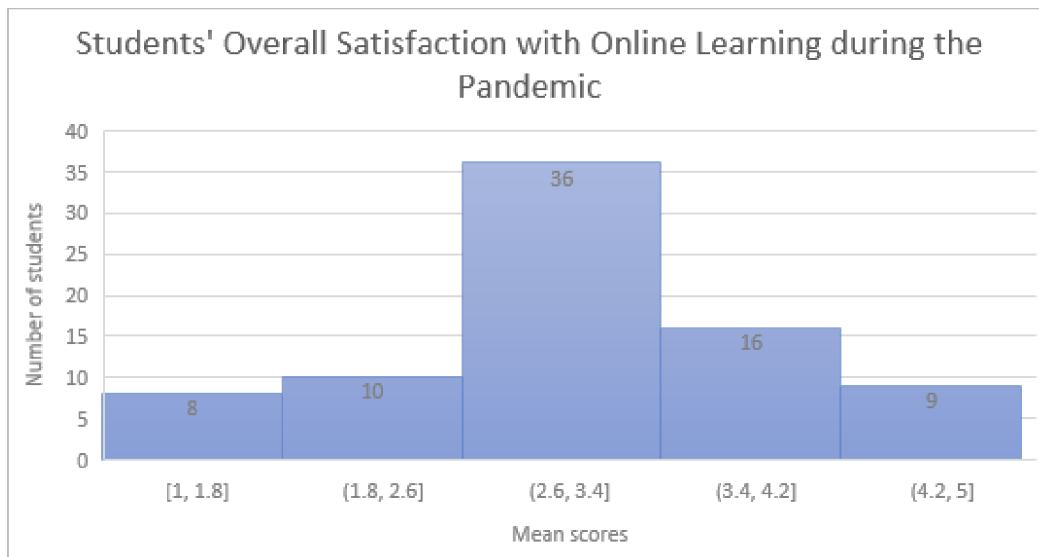
DISCUSSION AND CONCLUSION

The Covid-19 pandemic pushed educational institutions worldwide to adopt emergency remote education as their main form of instruction as they tried to ensure the continuity of educational services. Over a very compressed period of time, synchronous and asynchronous online learning delivered through devices including computers, laptops, tablets and mobile phones become the primary learning method (Selvanathan et al., 2020), but transforming core university services and training teachers and students to adjust to online learning has proved to be challenging and problematic in many regards. This research thus attempted to examine students' perceptions of online

learning, the university's preparedness and provision of support, the quality of online teaching, their familiarity with online technology, and their attitudes towards online classrooms.

With regard to students' experiences, although most reported that they had no prior experience with online learning, students' answers with regard to internet and computer self-efficacy showed that their digital skills and knowledge improved during their course of study. The students also rated the quality of online teaching at a high level, but these positive aspects failed to lift students' overall satisfaction with online learning, and the findings show that when asked about their preferred mode of study post-pandemic, many students chose face-to-face classrooms over fully online instruction. This could be partly explained with reference to a study conducted by Smith, Murphy and Mahoney (2003) that shows that students' self-management of learning and their level of comfort with e-learning were the two main factors that predicted their level of success. In this study, while students' self-assessment showed that they were comfortable with technology related to online learning, their reluctance to fully accept online instruction might stem from the fact that most Thai classrooms are teacher-centred and so students were not used to having to do things by themselves or to direct their own learning. Moreover, under remote emergency learning, students are required to be proactive and independent, and this might add to the pressure felt by students who lack these skills. There were also issues with students' lack of exposure to the general experience of life at university and with students' well-being and health, and the students viewed these two factors as being significantly negative issues that counted strongly against online classes. These findings are in fact in line with many studies showing that the abrupt transition to emergency remote learning can affect student's health and well-being (Doolan et al., 2021, Gatti et al., 2020, and Aristovnik, et al., 2020).

If we look at other aspects of the findings starting with the university's preparedness and provision of ongoing support for online education during the pandemic, students' overall satisfaction with this was at a moderate level. Although the university managed to rapidly upgrade its infrastructure and deliver online education to students, there were three main issues that needed to be addressed, namely the university's lack of communication with regard to its technology support, its lack of a clear policy on the provision of online and onsite classes, and the lack of financial support for students. While it is understandable that given differences in wealth, resources, facilities, size and location, institutions varied in the extent to which they could successfully make the transition to online education, the university should nevertheless focus on its messaging and to communicate better with students how it was prepared to help them in terms of its technological and financial support. Since the latter was the main concern for many students, the university should come up with a better suite of measures, including reduced fees. If this is impossible due to the financial commitments entailed in upgrading the facilities, the university could at least allow for tuition fees to be paid in installments. The findings also suggest that students regard blended learning as the second most preferable mode of learning, indicating that new opportunities await, assuming that efforts to upgrade infrastructure and technology do not dissipate with the ending of the pandemic. Gallagher and Palmer (2020) report the emergence of new trends in higher education as a result of the pandemic, and these include greater provision of MOOC-based degree courses, options for students to earn transferable university credits for a monthly subscription, digitalizing educational credentials, providing certificates and certifications that summarize achievements, skills or competencies, and partnering with outside industries or startups to develop online educational programs. In order to remain competitive amid the digital transformation of higher education, university executives need to think ahead and to seize exactly these kinds of opportunities, and while teachers and staff should be trained to be better able to utilize digital technology, they also need to be better informed about the changing landscape within which higher education operates.

At the classroom level, students' views were highly favorable towards the quality of the teaching that was provided during the pandemic, but this did not translate into a preference for online classes. One explanation for this could be the fact that while teachers were capable of using digital tools to deliver online classes, they may have been somewhat inflexible and have a tendency to assign significant amount of homework. This then replicated the rigidity of traditional classrooms and undermined the appeal of online classes, which offer flexibility in terms of both time and location. It is

understandable that because the switch to emergency remote education was unplanned and took place during a crisis, "there was not enough time for teachers to plan and prepare the teaching content in a way which is usual for online courses, so most of the teaching was a more or less improvised adaptation of the content prepared for the classroom to make up for the lack of in-person classroom time." (Farnell, Matijević and Schmidt, 2021, p.25). Given teachers' lack of experience and expertise in online teaching, it was not surprising that in online classes, they would behave in much the same way as they would in a traditional classroom, sticking to rigid timetables and deadlines while at the same time giving students more homework, and doing this without careful consideration of whether this aligned with students' expected learning outcomes. The teachers thus clearly need greater pedagogical content knowledge (PCK) when teaching online, which would include "technical and administrative aspects of teaching online (e.g., respectively, using platforms and tools and organizing workflows). More significantly, this includes the pedagogical foundations and knowledge of principles needed to design for, and facilitate, meaningful online learning experiences." (Rapanta et al., 2020)

It should be noted again that this research was carried out almost two years after the initial implementation of online education, and by this time students may have become completely familiar with online technology and the characteristics of online classes. However, students' preference for offline classes suggests that they were still struggling with the online environment, struggles that included technical challenges, health problems, their workload, and a lack of interaction with teachers and classmates. These results are in line with Chung, Subramaniam, and Dass (2020), who examined the readiness of Malaysian students for online learning amid Covid-19 pandemic and revealed that while students were moderately ready for online learning, if given a choice, more than half of the students didn't want to continue with online learning.

This study shows how students with little to no background knowledge in online teaching navigated the rapid transition from studying in face-to-face classrooms to learning online. The results show that while students were able to adjust to a changing teaching landscape, when the crisis abates, they are likely to return to the familiarity of traditional classrooms. However, to ensure that their newly acquired digital skills are not lost when the pandemic ends, the university needs not only to keep its infrastructure and technology in place, but also to invest in developing effective online pedagogy. Teachers should be trained in how to develop content, and how to design e-curricula that accommodate students' learning styles and provide sufficient support for them. The university should also have a clear policy on online education, and should prepare staff for the administration of digital examinations; given the ongoing technological revolution and the increasing popularity of online education, a readiness to teach online is essential for both individual teachers and for universities.

This study is limited in its applicability by the small number of participants, and the results should not be considered representative of all remote teaching. Nevertheless, as there are nearly 40 provincial universities in Thailand with similar demographic profiles, it is hoped that this study might shed some light on how students in these institutions view their online education. Because all students were studying within the English department, it might also not be possible for the results to be generalized for those in other disciplines, and future research should thus cover a larger and broader range of participants. A further issue relates to the use of self-assessment when collecting data on students' perceived self-efficacy as it is evident that individuals tend to overestimate this (Schlosser, Dunning, Johnson, & Kruger, 2013), and this could therefore potentially lead to incorrect conclusions. With regard to future research, issues such as self-directed learning and motivation with regard to online learning should be addressed in order to generate insights into different dimensions of these issues.

To sum up, the lockdown and school closures prompted many teachers to move to emergency remote education and forced many universities to implement large-scale changes in terms of technology and practice, but whether these changes will be temporary or long-term depends on individual university's vision of their future role and the preferences of teachers and students. If universities regard Covid-19 as a temporary setback and rush to return to normality when the crisis passes, the efforts made will have been wasted, but if universities treat the Covid-19 pandemic as an

opportunity to rethink their role and structure, this may help to create educational institutions staffed with well-trained teachers who are aware of the merits of online education and where instructors are able to deliver high-quality online content that is not simply a lesser, diminished version of face-to-face classes.

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