Remote Learning as a Strategic Model in the Face of the COVID-19 Crisis: Documentary Research

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Abstract

The objective of this research is to analyze the strategic model of remote learning fostered by Thai universities representing how COVID-19 has transformed remote learning into the only approach to meet the national measures of public health protection and to boost consecutively in education programs. Two scenarios are compared before and during the outbreak, in order to identify the best practice that can be adopted by Thai universities to leverage their digital supply and rival in an international context. After a context was generally analyzed to highlight the advantages and challenges pertaining to remote learning, the case of the Thai university systems was analyzed. Documentary analysis was also used to analyze the data, focusing on what Thai universities revealed through their related documents, official websites, as well as all genres of communication on digital strategies. Then, they were qualitatively analyzed to identify what sorts of platforms have been combined to ensure educational quality. The research findings highlight the resilience of Thai universities, able to respond and to re-organize themselves in a short period of time. The results of the outbreak are likely to strengthen Thai universities, able to amalgamate educational quality with the potential of technological advancement and to strive for the high standards demonstrated at the international level.

Keywords

remote learning, sustainability, digitalization, strategic model, COVID-19 crisis

รูปแบบเชิงกลยุทธ์การเรียนรู้ทางไกลในการเผชิญกับวิกฤตโควิด 19: การวิจัยเอกสาร

วิชัย ศิริธีรวสุ
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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อวิเคราะห์รูปแบบเชิงกลยุทธ์การเรียนรู้ทางไกลที่มหาวิทยาลัยไทยได้นำมาใช้ ซึ่งแสดงให้เห็นว่าโรคระบาดโควิด 19 ได้เปลี่ยนรูปแบบการจัดการเรียนการสอนให้เป็นแนวทางเดียวเพื่อตอบสนองต่อมาตรการการป้องกันด้านสาธารณสุขของประเทศ และเพื่อส่งเสริมหลักสูตรการศึกษาให้มีความต่อเนื่อง งานวิจัยนี้ทำการเปรียบเทียบสองสถานการณ์ ได้แก่ ก่อนและระหว่างการระบาดของโรคโควิด 19 เพื่อระบุแนวปฏิบัติที่ดีที่สุดที่มหาวิทยาลัยไทยสามารถนำประโยชน์จากอุปทานดิจิทัลไปใช้ อีกทั้งยังสามารถแข่งขันในบริบทระหว่างประเทศได้ หลังจากวิเคราะห์บริบทโดยทั่วไปถึงข้อดีและความท้าทายที่เกี่ยวข้องกับการเรียนรู้ทางไกลแล้ว จึงได้ทำการวิเคราะห์ระบบของมหาวิทยาลัยไทย การวิเคราะห์เอกสารถูกนำมาใช้เพื่อการวิเคราะห์ข้อมูลที่เกี่ยวข้อง เช่น เว็บไซต์ที่เป็นทางการต่าง ๆ ตลอดจนการสื่อสารทุกประเภทที่เกี่ยวกับกลยุทธ์ดิจิทัล การวิเคราะห์เชิงคุณภาพเพื่อระบุถึงประเภทของแพลตฟอร์มที่รวมกันเพื่อสร้างความเชื่อมั่นในคุณภาพการศึกษา ผลการวิจัยแสดงให้เห็นถึงความยืดหยุ่นของมหาวิทยาลัยไทยที่สามารถตอบสนองและจัดระเบียบตนเองได้ใหม่ในระยะเวลาอันสั้น ผลของโรคระบาดโควิด 19 ได้สร้างความเข้มแข็งให้กับมหาวิทยาลัยไทย ทำให้สามารถผสมผสานคุณภาพการศึกษาเข้ากับศักยภาพของความก้าวหน้าทางเทคโนโลยีเพื่อมุ่งมั่นสู่ระดับสากล

คำสำคัญ

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Introduction

Amidst various changes that happened over the years, digital transformation has transformed the way we work and do things as well as teaching and learning (Legg-Jack, 2021; Perrin & Wang, 2021). According to Laterza et al. (2020) and Gupta et al. (2020), digitization can be referred to as the implementation of various digital artifacts to transform the current business model, develop services, and accelerate economic activities. Therefore, education is considered as a solution to these existing dilemmas like economic crises, social inequality, and human rights; the goal of universities is not only to provide efficient education, but also to enhance the digital learning process (Rahiem, 2021b). Educational strategies are required to achieve new requirements and expectations of learners and stakeholders (Asanov et al., 2021). According to Rahiem (2020a), successful and potential students are the yields of academic provision by universities to ensure that new knowledge is constantly acquired during the course of their career path (Asanov et al., 2021).

In an internationally competitive globalized society characterized by the proliferation of the Internet and other technological advancements (Thapa et al., 2021), increasing individuals are motivated to seek new ways of learning opportunities regardless of physical presence at the university (Yang et al., 2020). This has led to the growth of remote learning. This is also regarded as the development of online courses and curriculum with the innovative implementation of a virtual university offering remote courses applying modern communication devices and providing state-accredited qualifications (Hash, 2021). This is, seen as a new competitor by traditional universities which are therefore, forced to modernize their strategies and adjust their technological supplies (Katz et al., 2021).

The true value of digitization and remote learning was highly focused during the COVID-19 emergency though remote learning was previously seen as a non-essence. As the current time of the outbreak, remote learning has become the only solution for the simultaneous implementation of educational and training pathways at all tertiary levels (MacMahon et al., 2020). Specifically, due to the health protection measures, remote learning is regarded as the perfect form of Emergency Remote Education (ERE) which permits all kinds of educational activities to continue to progress (Jung & Shin, 2021).

On the basis of these considerations, the remote learning strategy implemented by Thai universities was investigated to represent how the COVID-19 pandemic has accelerated the evolution of remote learning as a resilient solution during and after the outbreak (Chattaraj & Vijayaraghavan, 2021). In fact, according to Rahiem (2020a), remote learning is presently a tool to fully support the dimensions of society, environment, and sustainability with shared platforms to help create circular value, new community, and educational access (Vollbrecht et al., 2020).

Identifying specific best practices that can be applied by all Thai universities after the end of the state of emergency is important. The objective is to address the research questions on how Thai universities respond to the COVID-19 outbreak, and what the lessons learned from the COVID-19 outbreak are.

Research suggests that at the time of the emergence of the pandemic, Thai universities just began to embrace such innovations. This shows a huge retard compared to any other foreign university (Tuaycharoen, 2021). The COVID-19 pandemic has transformed all educational systems over the world, including Thai system causing all Thai universities to significantly modify their traditional activities (Ashour, 2024; Chansanam et al., 2021). Emergency remote education is then undertaken to ensure the progress of all educational programs of universities.

As a result, a case study technique was used. The research subject was Thai universities as they have never been studied for their abilities to change and embrace digitalization. Furthermore, they were studied at a particularly unusual historical period—the COVID-19 epidemic (Chansanam et al., 2021; Tuaycharoen, 2021).

Research Objectives

The objective of this research is to analyze the strategic model of remote learning that characterizes universities in Thailand, demonstrating the impacts caused by the spread of COVID-19 pandemic. Specifically, the objective is to specify the best practice that can be adopted by all Thai universities, even after the emergency has ended, to increase learning digitalization potentials at national and universal levels, and transform university remote education from unusual to common practices.

Literature Review

The evolution of digitalization in Thai universities

Digitalization is now pervasive throughout the world, transforming business operations and allowing extensive social and political alterations (Gupta et al., 2020). It is a process of transformation that necessitates an adoption of a particular approach aiming at satisfying the needs of consumers, and in some cases, ensuring competitive advantage (Laterza et al., 2020).

Several universities are encountering digitalization obstacles though they are expected to be the leaders of transformations (Zawacki-Richter, 2021) In fact, in an era marked by the widespread use of the internet and other technological gadgets, universities are required both to bestow learning, and to utilize modern innovation to autonomously instruct the ways of learning (Pokrovskaia et al., 2021).

Thai universities have begun to compete worldwide as the market has grown globalized. In this setting, they must utilize innovative digitalization for prospering in the age of technology (Khlaif et al., 2021). As a result, traditional universities have recently been urged to adjust their strategies to provide accessibility as well as affordability for all (Rahiem, 2021a), altering to individual requirements and offering education in a wide range of circumstances and contexts (Ewing & Cooper, 2021). They have been tasked with creating an innovative e-learning strategic approach to respond to the rising need for diverse learning experiences (Carter et al., 2020) while also encouraging the growth of remote learning (Biwer et al., 2021).

In this way, remote learning appears to be inextricably linked to the spread of new technology, but it really arose from the advent of traditional materials, which were cost-worthy and simply available for larger groups of viewers (Carrillo & Flores, 2020). As a result, the growth of remote learning may be split into three phases: the first phase was marked by materials produced for learners. The second phase was operated by television to offer courses. The third phase was marked by internet access and various platforms (Parker et al., 2021). Universities began to provide electronic learning opportunities during the last segment (1994–2000). Around 2008, Massive Open Online Courses (MOOCs) have been developed as a possible answer (Oh et al., 2020). When it comes to Thai MOOCs operation, its platforms have played a significant role in advancing and providing contemporary technology for internet-based education. These platforms include edX, Coursera, Khan Academy, Udemy, and others. MOOCs are particularly suitable for both higher education students and individuals' post-graduation (Chunwijitra et al., 2020). Thus, a growing number of Thai universities are adopting MOOCs technology, and an increasing number of educators are embracing the idea of delivering courses online through MOOCs (Khalid et al., 2021).

Accordingly, the growth of remote learning may be considered as a direct result of digitalization in Thai universities, allowing both society and educational organizations to generate new opportunities for growth, improvement, change, and renewal (Ribeiro, 2020) Definitely, digitalization provides numerous benefits, such as increased interactions and alliances with stakeholders (Perrin & Wang, 2021), but it also has drawbacks, such as the peril of losing clients who are accustomed to traditional services (Aleshkovskiy et al., 2020), and when a problem arises, old-school staff lack of the strategies to resolve it, necessitating the reliance on ICT specialists (Ribeiro, 2020).

According to Mukhtar et al. (2020), a remote learning solution can be scrutinized in terms of pros and cons: while it provides an accessible network for teaching and learning, it is also associated with a low quality assurance and rate of completion, including insufficiency of assessment instruments (Osman, 2020). Large amounts of work, difficult learning materials, time constraints, pressure, deprivation of feelings of community, and negative social impact are all possible reasons why learners are dissatisfied with learning evaluation, which remains one of the major difficulties (Dikaya et al., 2021; Schlesselman, 2020). In this aspect, remote learning has transformed teachers' roles to learners in terms of learning process and interaction (Horita et al., 2021).

The major advantage is increased access to learning resources (Adedoyin & Soykan, 2023), but learners themselves are in charge of instrumentalizing instructional activities instead of an expert, and they are not always competent in organizing their learning pathway. Remote learning may be considered as a fantastic chance for Thai universities to enhance their ranks and expand the supply for their students in the battle for competition and international recognition (Tuaycharoen, 2021).

As a result of this, learning is derived from the transformation and knowledge transfer via the interaction of individuals, whether online or offline (Alqabbani et al., 2020). It is not only the transmission of knowledge from instructors to students in a single context. Remote learning has evolved to achieve additional expectations in general. However, once students' needs involve learning and being instructed by the ways that are tailored to their individual preferences (applying modern technologies) (Alqabbani et al., 2020); Thai universities, particularly archaic ones, must consider online curriculum so as to improve their innovative digital strategy rapidly and successfully (Rotas & Cahapay, 2020).

Thai universities, on the other hand, must be digitally well-equipped, and academic staff, students, educational personnel must be prepared for studying, working, and instructing using digital techniques and strategies to drive educational innovation (Mavengere et al., 2021). Remote learning is a complicated topic with no united knowledge of how to organize, implement, and assess it. Besides, it can be influenced by the nature of educational science and philosophy. Remote learning education is regarded as the one encompassed by distance learning which may be characterized as a survival means at a moment of crisis where all resources are accessible (Mavengere et al., 2021). While remote learning is clearly a choice based upon preparation, feasible capabilities, and established forms, it is a necessity to change and be able to respond in an emergency circumstance (Alqabbani et al., 2020).

Of course, certain educational systems of Thai universities, which are more accustomed to encountering problems of educational management, might be more willing to accept and create digital remote learning formats, whilst others, which are still focused on their traditional structures, would be more hesitant (Ali, 2020). Thai universities must constantly keep updated and improve their educational management and process of learning to generate collaboration among students, faculties, and departments (Rotas & Cahapay, 2020).

Digital approaches necessitate knowledge, innovative technology skills, and confidence, but not all universities and academic staff are prepared to embrace such alterations. Certain systems of Thai universities have never been known for their digital abilities (Rotas & Cahapay, 2020). Consequently, there has been minimal focus on the remote learning potential and advancement in the domestic context.

Thai educational systems have been obliged to switch to online platforms due to the COVID-19 pandemic to maintain a progress in educational and training programs. More specifically, it is necessary for them to create unified solutions that include components from remote and online learning (Sohel et al., 2024; Chansanam et al., 2021). However, once they had to entirely transfer their activities online, they would not have had the time to prepare and manage them (Parker et al., 2021).

Teachers and learners' readiness are considered as the key challenge associated with the development of remote learning (MacMahon et al., 2020). Undoubtedly, it has signified the main strain encountered by Thai education system, which has been effectively overcome after an initial stage of uncertain phenomenon (Aulakh et al., 2023; Chansanam et al., 2021).

Remote learning which was formerly considered an option has become the sole way to holdup education, emphasizing certain universities' lack of resilience, useful educational resources, and capabilities (Rahiem, 2020a) In this regard, three varied assets appeared as critical for accomplishment: strong and robust management, capable of making a pertinent decision in harsh circumstances; and efficient ways of communication to better involve stakeholders both internally and externally; including rigid endorsement provided by educational staff to affirm continuity for new sorts of settings (Lohner & Aprea, 2021).

COVID-19 altered people's lifestyles across the world, resulting in a considerable number of fatalities and indiscernible social and economic destruction, but the resilience of systems can lessen such catastrophes, with knowledge being crucial in supplying the means to address the health issue (Koskela et al., 2020). The Covid-19 pandemic may be viewed as the start of a new age for universities and remote learning. However, Thai universities are still hesitant to embrace modern technology. In fact, it could be viewed as a chance to reform and optimize the educational system (Sururin et al., 2020). Nevertheless, digitization for universities must be viewed not as a goal in and of itself, but as a means of improving the services of universities in the long run. Moreover, some components, such as face-to-face learning and teaching, group projects, and learning from one another, must still remain (Rwodzi & Jager, 2021).

Regarding digitalization and the COVID-19 pandemic situation in 2024, Thai universities were permitted to resume operations as the impact of the COVID-19 epidemic diminished and came under control. However, ensuring the well-being of students remains paramount in implementing measures to prevent the spread of the virus. While some students have returned to traditional classroom settings, others continue to experience lingering negative effects, with some having relocated during the pandemic and becoming unreachable Consequently, educators must strategize to balance online and in-person teaching methods. Each university has discretion over the integration of digital technology and digital literacy to accommodate diverse learning scenarios (Promsron et al., 2024 Siriwattanarat et al., 2024). Various approaches have been adopted based on the availability of teachers and students. However, there has been no assessment conducted to determine the necessity of utilizing digital technology to address students' educational setbacks (Promsron et al., 2024).

Methodology

Following a theoretical foundation on the digitization of Thai universities with the aim of highlighting the benefits and concerns associated with the growth of remote learning, the case study technique will be used to accomplish the scope previously specified. In this case, the research will focus on the systems of Thai universities, which will serve as an exemplifying case (Chansanam et al., 2021; Tuaycharoen, 2021). It was picked not because it is exceptional or rare, but as it represents larger groups of situations for investigating a significant development. In this regard, the Thai case is likely to develop new theories as a result of the data, allowing for the study of the evolution of the phenomenon.

Regarding the student enrollment, there were twenty-two major universities with the number of students higher than forty thousand, forty-two moderately sized universities with eighteen thousand to forty thousand students, and forty minor universities with fewer than eighteen thousand students. Around seventy percent of students enrolled in state-run universities. Thirty percent of students attended non-state universities, and students registered in online universities are only there percent (Chaiya & Ahmad, 2021).

The study was divided into two parts: the first part provided an overview of remote learning in the national context prior to the outbreak, considering Thai traditional universities, and the second part, which took into consideration all state of Thailand-initiated government measures, concentrated only on the operations of universities that used the minimal number of online resources during the health crisis. As a result, for the second part of the study, only ninety universities were included in the sample.

Data were collected through official statements (Scott, 2006) from the Ministry of Higher Education, Science, Research, and Innovation (MHESI) as well as comments from universities under investigation. Even during the epidemic, not many universities openly shared their digital strategies. Hence, interacting with students

through email was the only approach. In this context, the initial approach involved searching official university websites for sections specifically devoted to the pandemic and response plans; however, due to data scarcity, all available channels of communication for digital strategies were taken into account.

The data were then subjected to a qualitative analysis by means of documentary analysis. To highlight the number and types of online platforms that universities use to deliver their instruction, the data for the second part of the study were organized in an Excel file.

The aim was to figure out how they mingle diverse platforms to improve the quality of educational services delivered.

An attempt was made to assess the future of Thai remote learning at the university level via a more thorough investigation, based on official university actions, addressing these research questions on how Thai universities have responded to the COVID-19 pandemic, and what lessons learned from the pandemic's situation are. Finally, the research results were given together with solutions to these questions.

Results

Thailand remote learning situations prior to the COVID-19 crisis will firstly be presented, taking into consideration the complete Thai university systems both traditional and online universities. Then, how universities' conduct which has changed in response to the health crisis will be presented later. Following a quick recap of the emergency measures implemented to control education, it will only highlight traditional universities' new e-learning strategies in an effort to find a new remote learning model that is based on the best practice for Thai higher education in the future.

Thailand remote learning prior to the COVID-19 pandemic

Referring to the period prior to the world health crisis, when every university across the globe began to think about and implement more sustainable learning experiences through the use of technology, Thai university systems were revealed to still be focused on restrictive bureaucratic regulations (Chansanam et al., 2021; Muangmee et al., 2021).

In this regard, Thailand displayed such a significant delay when compared to the international context (Chansanam et al., 2021; Marome & Shaw, 2021). The lack of autonomy that has recently afflicted Thai university systems is what caused the delay. Thai universities just began to highly consider their educational strategic plans in 2010 (Geroche & Yang, 2022; Chansanam et al., 2021; Hines & Dockiao, 2021). In fact, there were also two additional factors.

The first factor was dealt with a negative attitude toward the use of technology in education: modern technologies were viewed as harmful, resulting in estrangement for conventional teaching relations. Another factor stemmed from the customary practice of linking online programs offered by private online universities, which are thought to provide inferior education. Indeed, these universities can guarantee degree accomplishment in exchange for substantial expenses by providing virtual tests and having a poor assessment mechanism for what concerns students' development.

Despite the views of the leadership of the university system and people's traditional aversions, Thai universities have started to recognize the necessity of digital innovation. Students have begun to utilize the internet to supplement traditional lectures: they have downloaded educational materials recommended or made by instructors, or they have searched for additional information to learn more about certain course topics. Likewise, instructors have asked their learners to provide documents in digitalization.

In this regard, remote learning's importance has dramatically increased in the past ten years. More than a hundred courses were available online. Of course, online universities were responsible for many remote learning projects (approximately seventy percent), with traditional universities beginning to embrace new technology. At the same time, no traditional universities stated a desire to vary their resources via remote learning alternatives. They chose to discuss and publicize their excellence of instruction, research, and, on occasion, social relation activities, reinforcing conventional people's belief that they were superior to online universities.

In this sense, the educational revolution in digitalization had begun in Thailand. However, it was still in its initial stages, defined by a bottom-up approach that aspired to supplement rather than replace conventional courses.

Twenty-six traditional universities established certain design and delivery platforms (Mahidol, Chulalongkorn, Chiang Mai, Kasetsart, Prince of Songkla, Thammasat, Khon Kaen, Naresuan, Srinakharinwirot, Ramkhamhaeng, KMUTT, Burapha, KMITL, Silpakorn, Mahasarakham, SUT, Ubon Ratchathani, Walailak, NIDA, Maejo, KMUTN, Thaksin, Phayao, Mae Fah Luang, Nakhon Phanom, and Kalasin) aimed to offer remote learning courses funded by the Ministry of Education, and it was a notable attempt to respond to changes in the education market.

According to this finding, prior to the outbreak of COVID-19, Thai universities were characterized by a lack of precise legislation defining remote learning, its appeal, efficacy, and the composition of digital resources.

Thai universities' response to COVID-19 pandemic

Several legislative changes were implemented during the COVID-19 crisis to reorganize Thai university systems while also preserving public health and ensuring everyone's right to study.

The first health measure which was passed on March 21, 2020 was addressed to all educational institutions located in the virus's most affected provinces (Bangkok, Pathum Thani, and Samut Prakarn), and consisted of a simple recommendation to suspend teaching activities while respecting each university's autonomy. A more effective and rigid measure was Section 35 of the Communicable Diseases Act (CDA35) adopted on April 3, 2020, which required every educational institution at all levels to stop its operations, even in the least afflicted areas.

The measures were expanded to the national boundaries by the following CDA35, requiring every educational institution in Thailand to cease its teaching activities and provide remote learning alternatives. Universities might expand their research effort in this setting by adhering to security standards. With the goal of extending the suspension of instruction, the CDAs and legislation decrees were established.

Then, on June 15, more measures were enacted, with the goal of presenting indications for the following phases of lockdown and curfew. On June 22, every educational system was reminded of the necessity to suspend teaching activities and remote learning platforms were fully initiated. Ultimately, the government delegated authority to individual universities to arrange exams and graduations in September, causing disorder among academics.

Thai universities attempted to restart once the summer ended, giving blended learning alternatives, particularly for first-year students, but the next wave of COVID-19 directed the state to adopt more CDAs. Thai universities were encouraged to embrace remote learning and intelligent working solutions as a result of these initiatives, minimizing the danger of the contagious disease.

As a result, conventional universities have been asked to declare how they would operate until the health crisis ends, based upon their autonomy in making decisions. The quantity and type of internet platforms that ten universities have used are not disclosed. Then, forty-two universities have decided to conduct graduation exams and provide instruction using just one online platform. Twenty-three universities have selected two platforms (essentially, one for written exams and one for instruction and oral exams). Nine universities have selected three online platforms, and only Chiang Mai University has selected six different online platforms. With an emphasis on this university, each platform is devoted to a particular function: courses are delivered through Zoom, Google Meet, and Microsoft Teams, which are also utilized for oral discussions and presentations. Write and Improve is used for written tasks and exams; Socrative is used to propose practice and quizzes; and Google Classroom is used for paper-based written assignment. Besides, this is the only university to offer assistance for faculty with effective e-tools and e-accessible resources.

Microsoft Teams appears to be the most widely used; it has been accepted by thirty-seven universities; however, twenty-one universities have chosen to supplement Teams with other platforms, particularly for writing examinations, and five of them have chosen to utilize their own e-learning systems. Moodle has been adopted by fourteen universities; however, it is primarily used to assist the administration of written examinations for many of them. For four universities, it is the sole platform used.
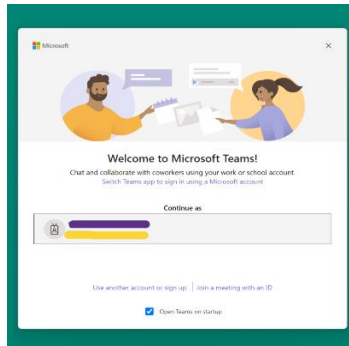
Figure 1 The most widely used platform of Microsoft Teams
Note. from Wichai Siriteerawasu

University presidents have begun to take interim measures since several universities have been recalled arranging their work autonomously throughout the health crisis's subsequent stages.

Twenty-three Thai universities do not consult their administration and management on official websites. Eleven universities do not follow any operations passed by the presidents based on university websites (other methods are probably used for their communication). Twenty-seven universities, on the other hand, operate online to function, with no further details regarding extended hours. Some affirm to persist up until new notifications are issued, others declare to continue online when the crisis is over.

Thirty universities have said that they will use remote learning platforms till the academic year ends, even if deadlines vary. Eight universities looked even more daring. It is expected to end the measures announced in early June 2021. Only certain universities have announced that it will operate remotely until the middle of August 2021. Instead, they will try to combine exam and graduation opportunities starting August 15, 2021. Only nine universities

expressed their plans to use remote learning in the second semester of the academic year of 2021.

With the spread of the second and third waves, a period of uncertainty prolonged for Thai universities: they moved onto remote learning, except for certain medical sciences, without identifying the period of the measure, which was strictly pertained to the pandemic crisis's tendency and the requirement of national public health.

Discussion

In a knowledge-based society, the pervasive use of the internet and other technology tools, along with globalization, have increased demand for new forms of education and the rise of digitalization, even in higher education (Nguyen et al., 2021). Remote learning is viewed as a step up from lifelong learning because of the rise of online universities and various forms of blended and e-learning. According to Becker et al. (2020), remote learning has the potential to facilitate universities' shift from closed to open education systems by guaranteeing open access, education, instruction, and network collaboration.

Nevertheless, it could pose a danger in terms of educational quality and the possibility of losing students as well. Remote learning can assist in reacting to the health crisis by allowing consistency in educational program management, particularly when configured as emergency remote education (Heldt et al., 2021).

In contrast to the global landscape, the Thai context has consistently been marked by a significant delay in the digitalization of education (Loukomies & Juuti, 2021). This is due to the country's prior negative perception of educational quality, educational processes, and technological devices offered by online universities.

Digitalization has opened up various possibilities in every single arena, including universities, by expanding stakeholder contacts and partnerships, as well as the capability to produce innovative and sustainable value (Lischer et al., 2022). However, not all universities have accepted such procedures, and although some have chosen to define themselves via the use of digital devices, others have expressed reservations about the use of technology in higher education (Garg et al., 2020).

Based on these considerations, the research highlights how the COVID-19 pandemic has driven Thai universities to change and experiment with an innovative strategic behavior at a time when the world health crisis has not yet ended. The goal was to examine and explain the resilience of the Thai university systems by comparing two contrasting scenarios, one before the COVID-19 epidemic and one defined by the necessity to tackle it (Garcia-Vedrenne et al., 2020). More specifically, the focus was on universities' emergency remote education strategies, with the goal of speculating on how the future of Thai universities possibly look together with remote learning that will be likely to become a common and structured way of practice (Avanesian et al., 2021).

Indeed, after Thai universities firstly attempt to implement a variety of technologies in education, it is in the middle of health crisis that emergency remote education has been conducted through the use of remote learning. (Killham et al., 2022) and transformed to the sole educational instrument to uphold educational consistency along with national health protection measures (Baranova et al., 2021). Definitely, it has a number of drawbacks, such as increased danger to students or worse educational quality (Lischer et al., 2022). This demonstrates that in order for universities to be a hub for student advancement and sociality, a sincere response is required.

Documentary analysis was used to examine the case of Thai universities, looking at the information that the universities published, announced, and posted on their official websites. The process of gathering data was challenging due to the fragmentation of

information shared by all universities and the numerous measures implemented by the Thai government to enforce the necessary lockdowns and curfews (Avanesian et al., 2021), which were first implemented in the most affected provinces before being expanded to the entire nation.

The most significant decrees in this regard are those related to the CDA, which came into effect on April 3, 2020, and required every educational institution to cease its instruction and activities and begin providing remote learning as a solution. The final ones enacted on June 22, 2020, have mandated traditional universities to declare how they will operate themselves until the crisis ends, based upon their autonomy in decision-making.

All Thai universities have set up a temporary COVID-19 page on their websites, with some just informing readers of proper hygiene practices, others providing virus updates, and yet others sharing the president's choices with their academic community. In this sense, it has been unable to examine the remote learning platform utilized for ten universities, eleven universities refuse to reveal their president's decision-making, and twenty-seven universities noted to perform remote education with no providing any additional detailed information.

According to the research findings, they reveal that Thai universities are resilient, capable of responding, developing, and rearranging themselves in just only two weeks. In fact, Thai university systems only grudgingly attempted to digitize itself before the pandemic, considering remote learning as a mere adjunct to traditional teaching methods and learning environments. However, it is precisely during this crisis that remote learning has become indispensable in safeguarding students' health and academic rights.

A new age for higher education is believed, marked by the systematic use of digital gadgets and, as a result, a greater focus on sustainable ways (Katz et al., 2021; Rotas & Cahapay, 2020).

To minimize a decline in the number of university students due to the COVID-19 pandemic, the Ministry of Education protects the educational right of university students through three key measures: decreased tuition costs, more scholarships, and rewards for digital divide. Written examinations and graduations remain a challenge for Thai universities, and they must respect the privacy of their students, and students themselves should be serious about these issues as well.

Conclusion

Remote learning is a crucial solution for Thai universities, enabling off-campus learning, blended learning, and green campuses. Despite emergency remote education, Thai systems continue to function, allowing students to continue their exams and graduations.

Remote learning has proved difficult for students who are not accustomed to studying in an online setting, as well as for professors who must devote time and effort to swiftly adapting traditional in-person instructions to a virtual approach. In this regard, Chiang Mai University is an excellent example, having implemented an ad hoc initiative to support lecturers through this difficult transition. Even in terms of remote teaching structures, this university is at the forefront: it uses six different platforms to assure the greatest results in all areas. Of course, different universities have created their own unique remote learning approaches, but for Thai universities, they have proved the significance of resilience to respond and maintain continuity in their research and instruction.

In times of crisis, technology's practical applications are essential for maintaining creative and long-lasting approaches to education and for upholding social distancing as the best practice. Three key elements became apparent when analyzing the COVID-19 pandemic's lessons learned regarding remote learning. They are as follows: strong and capable leadership to transfer management for the

entire phenomenon; efficient communication with high involvement and community sharing; and administrative support to maintain a specific community's continuity.

In the wake of the pandemic, a university will probably be stronger, more aware of the potential of digital technology and the value of online resources, and more connected to the real world. It might be a cutting-edge institution offering traditional and virtual learning. In this sense, the pandemic has ushered in a new era for Thai universities, showcasing the development of technology and highlighting the importance of remote learning as a means of promoting the sustainability of education. Universities must operate as centers of learning as long as information is the key to success.

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References

Adedoyin, O. B., & Soykan, E. (2023). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, *31*(2), 863-875. https://doi.org/10.1080/10494820.2020.1813180

Aleshkovskiy, I. A., Gasparishvili, A. T., Krukhmaleva, O. V., Narbut, N. P., & Savina, N. E. (2020). Russian university students about distance learning: Assessments and opportunities. *Vysshee Obrazovanie v Rossii*, *29*(10), 86-100. https://doi.org/10.31992/0869-3617-2020-29-10-86-100

Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, *10*(3), 16-25. https://doi.org/10.5539/hes.v10n3p16

Alqabbani, S., Almuwais, A., Benajiba, N., & Almoayad, F. (2020). Readiness towards emergency shifting to remote learning during COVID-19 pandemic among university instructors. *E-Learning and Digital Media*, *18*(5), 460-479. https://doi.org/10.1177/2042753020981651

Asanov, I., Flores, F., McKenzie, D., Mensmann, M., & Schulte, M. (2021). Remote-learning, time-use, and mental health of Ecuadorian high-school students during the COVID-19 quarantine. *World Development*, *138*, 1-9. https://doi.org/10.1016/j.worlddev.2020.105225

Ashour, S. (2024). How COVID-19 is reshaping the role and modes of higher education whilst moving towards a knowledge society: the case of the UAE. *Open Learning: The Journal of Open, Distance and e-Learning*, *39*(1), 52–67. https://doi.org/10.1080/02680513.2021.1930526

Aulakh, K., Roul, R. K., & Kaushal, M. (2023). E-learning enhancement through educational data mining with Covid-19 outbreak period in backdrop: A review. *International Journal of Educational Development, 101*, 1-17. https://doi.org/10.1016/j.ijedudev.2023.102814

Avanesian, G., Mizunoya, S., & Amaro, D. (2021). How many students could continue learning during COVID-19-caused school closures? Introducing a new reachability indicator for measuring equity of remote learning. *International Journal of Educational Development*, *84*, 1-8. https://doi.org/10.1016/j.ijedudev.2021.102421

Baranova, S., Nīmante, D., Kalniņa, D., & Oļesika, A. (2021). Students' perspective on remote on-line teaching and learning at the university of Latvia in the first and second COVID-19 period. *Sustainability (Switzerland)*, *13*(21), 1-14. https://doi.org/10.3390/su132111890

Becker, S. P., Breaux, R., Cusick, C. N., Dvorsky, M. R., Marsh, N. P., Sciberras, E., & Langberg, J. M. (2020). Remote learning during COVID-19: examining school practices, service continuation, and difficulties for adolescents with and without attention-deficit/hyperactivity disorder. *Journal of Adolescent Health*, *67*(6), 769-777. https://doi.org/10.1016/j.jadohealth.2020.09.002

Biwer, F., Wiradhany, W., oude Egbrink, M., Hospers, H., Wasenitz, S., Jansen, W., & de Bruin, A. (2021). Changes and adaptations: how university students self-regulate their online learning during the COVID-19 pandemic. *Frontiers in Psychology*, *12*, 1-12. https://doi.org/10.3389/fpsyg.2021.642593

Carrillo, C., & Flores, M. A. (2020). COVID-19 and teacher education: a literature review of online teaching and learning practices. *European Journal of Teacher Education*, *43*(4), 466-487. https://doi.org/10.1080/02619768.2020.1821184

Carter, R. A., Rice, M., Yang, S., & Jackson, H. A. (2020). Self-regulated learning in online learning environments: strategies for remote learning. *Information and Learning Science*, *121*(5/6), 321-329. https://doi.org/10.1108/ILS-04-2020-0114

Chaiya, C., & Ahmad, M. M. (2021). Success or failure of the Thai higher education development—critical factors in the policy process of quality assurance. *Sustainability (Switzerland)*, *13*(17), 1-29. https://doi.org/10.3390/su13179486

Chansanam, W., Tuamsuk, K., Poonpon, K., & Ngootip, T. (2021). Development of online learning platform for Thai university students. *International Journal of Information and Education Technology*, *11*(8), 348–355. https://doi.org/10.18178/ijiet.2021.11.8.1534

Chattaraj, D., & Vijayaraghavan, A. P. (2021). Why learning space matters: a script approach to the phenomena of learning in the emergency remote learning scenario. *Journal of Computers in Education*, *8*(3), 343-364. https://doi.org/10.1007/s40692-021-00182-z

Chunwijitra, S., Khanti, P., Suntiwichaya, S., Krairaksa, K., Tummarattananont, P., Buranarach, M., & Wutiwiwatchai, C. (2020). Development of MOOC service framework for life long learning: A case study of Thai MOOC. *IEICE Transactions on Information and Systems, 103*(5), 1078-1087. https://doi.org/10.1587/transinf.2019EDP7262

Dikaya, L. A., Avanesian, G., Dikiy, I. S., Kirik, V. A., & Egorova, V. A. (2021). How personality traits are related to the attitudes toward forced remote learning during COVID-19: Predictive analysis using generalized additive modeling. *Frontiers in Education*, *6*, 1-10. https://doi.org/10.3389/feduc.2021.629213

Ewing, L. A., & Cooper, H. B. (2021). Technology-enabled remote learning during Covid-19: perspectives of Australian teachers, students and parents. *Technology, Pedagogy and Education*, *30*(1), 41-57. https://doi.org/10.1080/1475939X.2020.1868562

Garcia-Vedrenne, A. E., Orland, C., Ballare, K. M., Shapiro, B., & Wayne, R. K. (2020). Ten strategies for a successful transition to remote learning: Lessons learned with a flipped course. *Ecology and Evolution*, *10*(22), 12620-12634. https://doi.org/10.1002/ece3.6760

Garg, M., Eniasivam, A., Satterfield, J., Norton, B., Austin, E., & Dohan, D. (2020). Rapid transition of a preclinical health systems science and social justice course to remote learning in the time of coronavirus. *Medical Education Online*, *25*(1), 1-6. https://doi.org/10.1080/10872981.2020.1812225

Geroche, J.B. & Yang, X. (2022). The organizational change process during COVID-19 pandemic in a public university: The case of Kasetsart University, Thailand. I*nternational Research Journal of Science, Technology, Education, and Management, 2*(3), 26-37. https://doi.org/10.5281/zenodo.7136374

Gupta, R., Seetharaman, A., & Maddulety, K. (2020). Critical success factors influencing the adoption of digitalisation for teaching and learning by business schools. *Education and Information Technologies*, *25*, 3481-3502. https://doi.org/10.1007/s10639-020-10246-9

Hash, P. M. (2021). Remote learning in school bands during the COVID-19 shutdown. *Journal of Research in Music Education*, *68*(4), 381-397. https://doi.org/10.1177/0022429420967008

Heldt, J. P., Agrawal, A., Loeb, R., Richards, M. C., Castillo, E. G., & DeBonis, K. (2021). We're Not Sure We Like It but We Still Want More: Trainee and Faculty Perceptions of Remote Learning During the COVID-19 Pandemic. *Academic Psychiatry*, *45*(5), 598-602. https://doi.org/10.1007/s40596-021-01403-4

Hines, A. & Dockiao, L. (2021), Key issues influencing the future internationalization of higher education: the case of Thailand. *On the Horizon, 29*(3), 77-100. https://doi.org/10.1108/OTH-03-2021-0044

Horita, R., Nishio, A., & Yamamoto, M. (2021). The effect of remote learning on the mental health of first year university students in Japan. *Psychiatry Research*, *295*, 1-3. https://doi.org/10.1016/j.psychres.2020.113561

Jung, J. H., & Shin, J. I. (2021). Assessment of university students on online remote learning during COVID-19 pandemic in Korea: An empirical study. *Sustainability (Switzerland)*, *13*(19), 1-13. https://doi.org/10.3390/su131910821

Katz, V. S., Jordan, A. B., & Ognyanova, K. (2021). Digital inequality, faculty communication, and remote learning experiences during the COVID-19 pandemic: A survey of U.S. undergraduates. *PLoS ONE, 16*(2), 1-16. https://doi.org/10.1371/journal.pone.0246641

Khalid, B., Lis, M., Chaiyasoonthorn, W., & Chaveesuk S. (2021). Factors influencing behavioural intention to use MOOCs. *Engineering Management in Production and Services*, *13*(2), 83-95. https://doi.org/10.2478/emj-2021-0014

Khlaif, Z. N., Salha, S., & Kouraichi, B. (2021). Emergency remote learning during COVID-19 crisis: Students' engagement. *Education and Information Technologies*, *26*(6), 7033-7055. https://doi.org/10.1007/s10639-021-10566-4

Killham, J. E., Estanga, L., Ekpe, L., & Mejia, B. (2022). The strength of a tigress: an examination of Latina first-generation college students' tenacity during the rapid shift to remote learning. *Journal of Research on Technology in Education*, *54*(S1), S253-S272. https://doi.org/10.1080/15391523.2021.1962450

Koskela, T., Pihlainen, K., Piispa-Hakala, S., Vornanen, R., & Hämäläinen, J. (2020). Parents' views on family resiliency in sustainable remote schooling during the COVID-19 outbreak in Finland. *Sustainability (Switzerland)*, *12*(21), 1-20. https://doi.org/10.3390/su12218844

Laterza, V., Tømte, C. E., & Pinheiro, R. M. (2020). Guest Editorial: Digital transformations with "Nordic characteristics"? Latest trends in the digitalisation of teaching and learning in Nordic higher education. *Nordic Journal of Digital Literacy*, *15*(4), 225-233. https://doi.org/10.18261/ISSN.1891-943X-2020-04-01

Legg-Jack, D. W. (2021). Digitalization of teaching and learning in Nigeria amid COVID-19 pandemic: Challenges and lessons for education 4.0 and 4IR. *International Scientific Research Journal*, *77*(10). https://doi.org/10.21506/j.ponte.2021.10.10

Lischer, S., Safi, N., & Dickson, C. (2022). Remote learning and students' mental health during the Covid-19 pandemic: A mixed-method enquiry. *Prospects*, *51*, 589-599. https://doi.org/10.1007/s11125-020-09530-w

Lohner, M. S., & Aprea, C. (2021). Exploring the potential of journal interventions to promote resilience in university students. *Frontiers in Psychology*, *12*, 1-12. https://doi.org/10.3389/fpsyg.2021.702683

Loukomies, A., & Juuti, K. (2021). Primary students' experiences of remote learning during covid-19 school closures: A case study of Finland. *Education Sciences*, *11*(9), 560. https://doi.org/10.3390/educsci11090560

MacMahon, S., Leggett, J., & Carroll, A. (2020). Promoting individual and group regulation through social connection: strategies for remote learning. *Information and Learning Science*, *121*(5/6), 353-363. https://doi.org/10.1108/ILS-04-2020-0101

Marome, W., & Shaw, R. (2021). COVID-19 response in Thailand and its implications on future preparedness. *International journal of environmental research and public health, 18*(3), 1089. https://doi.org/10.3390/ijerph18031089

Mavengere, N. B., Henriksen-Bulmer, J., Passmore, D., Mayes, H., Fakorede, O., Coles, M., & Atfield-Cutts, S. (2021). Applying innovative technologies and practices in the rapid shift to remote learning. *Communications of the Association for Information Systems, 48*. https://doi.org/10.17705/1CAIS.04824

Muangmee, C., Kot, S., Meekaewkunchorn, N., Kassakorn, N., Tiranawatananun, S., & Khalid, B. (2021). Students' Use Behavior towards E-Learning Tools during COVID-19 Pandemics: Case Study of Higher Educational Institutions of Thailand. *International Journal of Evaluation and Research in Education, 10*(4), 1166-1175. https://doi.org/10.11591/ijere.v10i4.21821

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, limitations and recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences, 36*(COVID19-S4), S27-S31. https://doi: 10.12669/pjms.36.COVID19-S4.2785

Nguyen, T., Netto, C. L. M., Wilkins, J. F., Bröker, P., Vargas, E. E., Sealfon, C. D., Puthipiroj, P., Li, K. S., Bowler, J. E., Hinson, H. R., Pujar, M., & Stein, G. M. (2021). Insights into students' experiences and perceptions of remote learning methods: From the COVID-19 pandemic to best practice for the future. *Frontiers in Education, 6*, 1-9. https://doi.org/10.3389/feduc.2021.647986

Oh, E. G., Chang, Y., & Park, S. W. (2020). Design review of MOOCs: Application of e-learning design principles. *Journal of Computing in Higher Education, 32*(3), 455-475. https://doi.org/10.1007/s12528-019-09243-w

Osman, M. E. T. (2020). Global impact of COVID-19 on education systems: The emergency remote teaching at Sultan Qaboos University. *Journal of Education for Teaching*, *46*(4), 463-471. https://doi.org/10.1080/02607476.2020.1802583

Parker, S. W., Hansen, M. A., & Bernadowski, C. (2021). Covid-19 campus closures in the United States: American student perceptions of forced transition to remote learning. *Social Sciences*, *10*(2), 62. https://doi.org/10.3390/socsci10020062

Perrin, S., & Wang, L. (2021). COVID-19 and rapid digitalization of learning and teaching: Quality assurance issues and solutions in a Sino-foreign higher education institution. *Quality Assurance in Education*, *29*(4), 463-476. https://doi.org/10.1108/QAE-12-2020-0167

Pokrovskaia, N. N., Leontyeva, V. L., Ababkova, M. Y., & D'Ascenzo, F. (2021). Regulation of digital behavior models for knowledge transfer: Organizational concerns of remote learning. *Education Sciences*, *11*(10), 52. https://doi.org/10.3390/educsci11100592

Promsron, K., Nilsook, P., Jitsupa, J., Sangboonraung, W., Saeung, O., & Jinwan W. (2024). Needs assessment in the use of digital technology for learning loss recovery of students at the basic education level. *International Journal of Learning Teaching and Educational Research, 23*(1), 59-63. https://doi.org/10.26803/ijlter.23.1.4

Rahiem, M. D. H. (2020a). The emergency remote learning experience of university students in Indonesia amidst the COVID-19 crisis. *International Journal of Learning, Teaching and Educational Research*, *19*(6). https://doi.org/10.26803/ijlter.19.6.1

Rahiem, M. D. H. (2021a). Indonesian university students' likes and dislikes about emergency remote learning during the COVID-19 pandemic. *Asian Journal of University Education*, *17*(1), 1-18. https://doi.org/10.24191/ajue.v17i1.11525

Rahiem, M. D. H. (2021b). Remaining motivated despite the limitations: University students' learning propensity during the COVID-19 pandemic. *Children and Youth Services Review*, *120*. https://doi.org/10.1016/j.childyouth.2020.105802

Ribeiro, R. (2020). *How university faculty embraced the remote learning shift.* https://edtechmagazine.com/higher/article/2020 /04

Rotas, E. E., & Cahapay, M. B. (2020). Difficulties in remote learning: Voices of Philippine university students in the wake of COVID-19 crisis. *Asian Journal of Distance Education*, *15*(2), 147-158. https://doi.org/ EJ1285295

Rwodzi, C., & Jager, L. De. (2021). Resilient English teachers' use of remote teaching and learning strategies in Gauteng resource-constrained township secondary schools. *Perspectives in Education*, *39*(2), 62-78. https://doi.org/10.18820/2519593X/PIE.V39.I3.6

Schlesselman, L. S. (2020). Perspective from a teaching and learning center during emergency remote teaching. *American Journal of Pharmaceutical Education*, *84*(8), 1042-1044. https://doi.org/10.5688/ajpe8142

Scott, J. (2006). *Documentary research*. SAGE Publications.

Siriwattanarat, R., Meethongjan, K., Tsailexthim, D., & Wongroj, W. (2024). The study of digital literacy components for youths during the COVID-19 pandemic in Bangkok, Thailand. *International Journal of Evaluation and Research in Education*, *13*(1), 607-616. https://doi.org/10.11591/ijere.v13i1.26575

Sohel, M. S., Sifullah, M. K., Hossain, B., Hossain, M. A., Sarker, M. F. H., Hossain, I., Hossain, M. E., & Uddin, M. R. (2024). E-Learning Experience of Indigenous Rural Communities in the Face of COVID-19 Crisis in Chittagong Hills Tracts Region, Bangladesh: A Qualitative Investigation. *International Journal of Community Well-Being*, 1-24. https://doi.org/10.1007/s42413-024-00207-2

Sururin, S., Mahmuda, M. C., & Muslim, M. (2020). Family engagement in nurturing students' resilience during remote learning in COVID-19 pandemic. *TARBIYA: Journal of Education in Muslim Society*, *7*(2), 204-216. https://doi.org/10.15408/tjems.v7i2.20582

Thapa, P., Bhandari, S. L., & Pathak, S. (2021). Nursing students' attitude on the practice of e-learning: A cross-sectional survey amid COVID-19 in Nepal. *PLoS ONE*, *16*(6), e0253651. https://doi.org/10.1371/journal.pone.0253651

Tuaycharoen, N. (2021). University-wide online learning during COVID-19: From policy to practice. *International Journal of Interactive Mobile Technologies*, *15*(2), 38–54. https://doi.org/10.3991/ijim.v15i02.18143

Vollbrecht, P. J., Porter-Stransky, K. A., & Lackey-Cornelison, W. L. (2020). Lessons learned while creating an effective emergency remote learning environment for students during the COVID-19 pandemic. *Advances in Physiology Education*, *44*(4), 722-725. https://doi.org/10.1152/advan.00140.2020

Yang, S., Kwak, S. G., Ko, E. J., & Chang, M. C. (2020). The mental health burden of the COVID-19 pandemic on physical therapists. *International Journal of Environmental Research and Public Health*, *17*(10), 3723. https://doi.org/10.3390/ijerph17103723

Zawacki-Richter, O. (2021). The current state and impact of COVID-19 on digital higher education in Germany. *Human Behavior and Emerging Technologies*, *3*(1), 218-226. https://doi.org/10.1002/hbe2.238

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