Original Article

Online Education in Thailand During the Crisis and Beyond

Vichaya Lipipun[1] and Chatwarun Angasinha[2*]

ARTICLE INFO

Name of Author:

1. Vichaya Lipipun
College of Social Innovation, Rangsit University, Pathum Thani, Thailand
Email: tai.vlipipun@gmail.com

Corresponding Author*:

2. Asisst.Prof.Dr. Chatwarun Angasinha
College of Social Innovation, Rangsit University, Pathum Thani, Thailand
Email: chattrsu@gmail.com

ABSTRACT

Education has been slow in keeping up with other social changes in the digital era where all activities are performed online through mobile devices. Open-source resources, student-centered approach, and personalized learning are core elements of online education. A design to teach in the new digital ecology requires an extensive effort to ensure an engaging learning experience. This study aims to explain current trends in education transformation particularly during the COVID-19 pandemic, and beyond and provide recommendations to properly design participatory learning sessions. The study is an analysis of literature reviews that depicts the current situations of Thai education. The findings revealed that the digital infrastructure in Thailand particularly at schools is ready for the digital education transformation. Students should be able to utilize school resources to access free open-source materials online to supplement their learning. Regardless of the individuals' proficiency in technology, digital literacy can be taught and learned to enable educators and learners to become active digital citizens who can self-taught through available resources online. With such capability of a digital citizen, lifelong learning become a vital aspect of life in a digital environment.

Introduction

Through an adoption of technology and its advancement, Thai citizens are unknowingly changing their behaviors in ways of teaching and learning. New knowledge no longer is concentrated in institutions or libraries. Attaining new knowledge in the digital era is simple from a finger-tip. Online platform and search engines have become the new medium of information sharing and exchanging. Formal education, however, may seem slow in adopting technology in the curriculum. The catalyst of such technological adoption among schools is due to the COVID-19 pandemic that paused the whole world by surprise. During the past 4 years since the pandemic was announced by World Health Organization (WHO) on January 30th, 2020, all education institutions and schools were closed to abide by the social distancing measures and local regulations to control the pandemic (WHO, 2023). In Thailand, the nation enforced the strong public health and social measures on March 26, 2020 and progressed into a full-scale locked down in April 2020. The mandatory school closures were imposed the same month. While the first wave of the pandemic seemed to subside, schools in high-infection areas remained closed in January 2021 when the second wave of the pandemic brought a new variant of the coronavirus (Rajatanavin, Tuangratananon, Suphanchaimat, & Tangcharoensathien, 2021). Teachers and educators were facing with new challenges that they were not prepared for. New methods of teaching and learning were then introduced and adopted since there was no other option available during the time.

Several studies on online platform in Thailand have been conducted, especially during the COVID-19 pandemic. Songkram and Osuwan (2022) studied the acceptance of technology and behavioral changes after introducing digital learning platforms for primary to high school students in Thailand. Few studies reflected on current obstacles that Thai educators and learners were facing and how they should cope after the post pandemic. Potential recommendations to adjust teaching and learning applicable to the digital era while abiding by the public health and social measures are limited. This research study is aiming to assess digital platforms that are currently available and new evolvement of digital integration into education and curriculum that is more reflective to the digital era of education. The introduction of digital education has overcome many obstacles during the COVID-19. This study is intending to promote digital education beyond the pandemic and the practice of digital education that should be encouraged to transform education into the digital era. This paper is organized as follows: the introduction, the literature review, the methodology, the findings, discussion of findings, and the conclusions and recommendations.

Literature Review

The paper refers to five main concepts and theories: models of teaching and learning, digital generation gaps, connectivism education theory, digital divide, the Internet and infrastructure of the digital environment. Models of teaching and learning discuss variation of teaching and learning methods that can be implemented at school. Connectivism education theory is a theory introduced by Siemens (2005) to explain the education system once the technology and the Internet have been fundamental element to the society and knowledge. Digital divide is as mentioned by Castells (2010b) and Qiu (2009) categorized the privileges that citizens have if they are able to access the Internet. Without the Internet, knowledge is deprived

from those who cannot afford such privilege. Therefore, the digital divide still remains prominent in Thailand.

According to Ashour, El-Refae, & Zaitoun (2021), designing appropriate online courses and delivering sessions in a virtual space require extensive efforts from educators to thrive in a digital environment. Situation based varies due to circumstances to deploy face-to-face teaching, online learning, or a hybrid of onsite and online teaching and learning. Classes can be delivered digitally and supplemented by physical visits at school if permissible. Henry (2018) mentioned that a hybrid model of teaching and learning is also known as blended learning. This concept has been introduced even prior to the pandemic but not widely adopted. Blended learning becomes the solution in responding to the shortages of teachers and insufficient funding by the government for education. Therefore, digital education is a new reality of distance learning that has been implemented.

While many studies have been studied on generation gap of behavioral changes through technology, Prensky (2001) introduced a new concept that is based on generations of digital adoption in their lives. Digital citizens can be mainly categorized into two distinct behaviors and mindsets: digital natives and digital immigrants. Digital natives are the generations Alpha, Z and Y of which they were born into technological integration and have been exposed to technology during childhood. They then are familiar with the rapid changes of technological

advancement. Browsing through the internet, using new applications, learning new technological skills become easier for them to comprehend (Prensky, 2001). Digital

immigrants are citizens who have been converted to digital citizens later in their adulthood. Generations X, Baby Boomers, and Silent are typically digital immigrants (Prensky, 2001). This concept does not imply that digital natives are more technological savvy than digital immigrants. Many digital immigrants are the forefront adopters of technology and many are experts of such advancement. Prensky (2001) is aiming to explain the behavior of two sets of groups that they think, perceive, and process information differently. Therefore, educators who are digital immigrants must overcome the barriers they face with technology integration while trying to teach the learners who are digital natives the curriculum. To design an engaging and active learning session, educators should understand the behaviors of digital natives to ensure active learning approach can be realized.

Behaviorism, cognitivism, constructivism, and humanism education theories were established prior to the digital era of which they laid the foundations for educators to provide effective education (Lockey, Conaghan, Bland, & Astin, 2020). Siemens (2005) recognized that these education theories are not reflective of current social phenomena of education and so proposed a new education theory, connectivism, to describe learning principles and processes. With blended learning as a model of teaching and learning with an extensive of digital platform and integration, connectivism is providing insight of the 21st century era of digital education. Lifelong learning and informal learning have become the key aspects of learning environment. Siemens (2005) stressed that the skill to find new knowledge is more essential than the current knowledge one possessed. The skillset that is the core of connectivism is knowing and learning to find new knowledge at all time so that digital citizens can evolve along with the technology. According to Khan (2012), a teacher can be a classroom teacher, a parent, a mentor, or even a

peer. One can even self-taught and self-learned through available online open-sources. Information is readily available for access as long as the person is connected to the Internet and the network. Personalized learning through free open-source resources online allows learners to explore and gain new knowledge at their own pace while fostering active learning experience (Khan, 2012).

According to Castells (2001), the Internet is the most essential infrastructure for the new digital environment; of which the new society has become a network society with a culture of virtuality that defies time and space. This transformation is generating new social practices and behaviors (Castells, 2010a). Education, likewise, is a part of such socio-technological advancement. Therefore, the Internet has become the basis of the new era of teaching and learning. It is hard to imagine life without the Internet and mobile devices at present. Even basic smart phones can connect a person to information with just one click. New knowledge can easily be attained via a small device through the network that the device is connected. While not everyone has equal access to the Internet and mobile connection, it is evident that connecting to the network is essential to living environments of the digital era. If one is not connected to the network, one is losing an opportunity in attaining growth in all perspectives of digital platforms (Castells, 2010b). This implies that a person is losing an opportunity to attain new knowledge or skillset if unable to connect to the network as learning contents are available digitally. Qiu (2009) furthered Castells' work on the digital inequality that with the Internet become a new basis of digital environment, people are required to be connected to attain information. Qiu classified people into 3 main groups depending on how they are connected to the network: the information have, information have-less, and information have-not. The information have enjoy the luxury of the full access of the Internet and wireless connection; and chances are that each information have owns more than 1 smart device. The information have-less is considered the majority of the population where people are connected through the network mainly through their smart phones with basic plan sufficient for access. This includes periodic disruption of signal from the network provider. The information have-not are the laggards of the population. This is mainly due to their socio-economic background that makes them unable to access the basic infrastructure. This may include people that are unable to own a smart device or unable to connect to the Internet. Some people may not even have an access to electricity infrastructure let alone the wireless communication infrastructure.

According to UNESCO (2023), lifelong learning is a crucial element of education that pertains to both childhood and adulthood. Learning does not stop once a person graduated from an institutionalized education. A mix of formal and informal learning is the new norm of digital education. Therefore, people must evolve along with the technology instead of trying to catch up with technology. Active learning habit is a new approach to foster one's endeavor in continuing to grow professionally or academically through means of self-teaching and self-learning from free online open-source resources.

Methodology

This study used a documentary and literature reviews to assess the current situations of digital education and how distance learning can be adapted to address obstacles of school closures during the pandemic and beyond. Relevant dissertations, studies, journals,

publications, literature, concepts, and theories are analyzed. All documents are in digital formats and are available online.

Findings

Socio-economic background is a fundamental aspect in creating barriers to digital education access. School closures due to the COVID-19 pandemic made Thai education vulnerable to the information have-not group of students who were unable to attend schools and were unable to access study materials online or digitally. This leads back to blended learning model discussed by Henry (2018), that a mix of physical attendance and online is needed. However, in the situation of information have-not group, physical attendance at school may still be required to ensure that students can catch up with the courses and maintain their academic progression. With a smaller group of students, teachers should be able to dedicate time for students in need of help when transitioning into digital education is impossible for them. 99% of schools in Thailand have access to electricity, computers, and the Internet. Only 75% of households have connected to the Internet, most of which are connected to the Internet via wireless communication through mobile devices (Mongkhonvanit & Dipendra, 2021). Analyzing this data, the information have-not group of learners that have no access to the Internet at home can attend schools to continue their education via an online platform. Schools then are the physical space that is critical to the success of learning environment. This does not mean that information have or information have-less are not allowed to attend schools during the closures. To abide by the guidelines from the Ministry of Public Health, 2 meters spacing must be maintained among individuals (Rajatanavin et al., 2021), teachers can design a classroom for students that require physical presence accordingly so that students will not fall behind the curriculum. The information have-less group of students are the students with basic smart devices that allow them to attend online classes real-time. However, these low-end devices cannot tolerate 6-8 continuous hours of operations through video conferencing application. Therefore, a design of the course must take considerations of technological barriers of the learners' learning devices and their connection to the Internet. Teachers also need the support system among each other to coordinate course design to applicable needs and technical support from the technical teams.

Even the information have enjoy the opulence of information and digital access, not all learners can attain the most benefits that the Internet and information available online can offer. In alignment with Prensky (2001), digital natives are technological proficient in navigation through the Internet galaxy but still need guidance from their teachers in searching for relevant information or data. Even digital natives are able to obtain the data required, they still need proper instruction of how to extract data and analyze data accordingly. Knowing whether the resource is reliable and trustworthy is also another condition that learners must learn to properly evaluate the information available at hand. Therefore, the roles of educators do not fade away but rather a shift in being a facilitator, a mentor, or a moderator pertaining to each circumstance. Teachers' confidence in their digital literacy and their attitudes toward technology can be an obstacle or an opportunity to transform education with effective technology integration (Chu et al., 2017). While most teachers are digital immigrants, they still require formal trainings through training programs that can assist them in teaching. The grooming process of creating 21st century teachers is critical to the success of Thai education.

The more confident they are with technology; they will feel more comfortable to learn new knowledge and design coursework applicable to situations.

With the technological advancement, continuous learning is pressuring everyone to keep themselves up-to-date with the rapid changes of digital environments (Siemens, 2008). Flexibility and adaptability are the fundamental aspects of digital platforms. The rigid structure of formal education will slowly change to keep up with the paradigm shift of the digital reality. As stated by the UNESCO International Bureau of Education that a development of evolutionary education is on its way to advocate and build digital citizens (Rabinovitch, 2019). Personalized learning through an open-source resources then can be supplemental resources of education that can assist both educators and learners in digital teaching and learning. An online community can be a virtual space of sharing and exchanging information so that all educators and learners can learn from one another. There is an extensive free open-source information available online. Some are provided by nonprofit educators who have passion to advocate the growth of digital education and distance learning in order to provide more opportunities. According to the United Nations (2022), education should be free for all and everyone should have the right to free education.

Discussions

The researchers were able to relate Qiu's (2009) classification of the digital divide to Thai teachers and learners. For the students who are unable to connect to the Internet to attend online sessions, they ultimately will fall behind classes. With a prolonged social distancing measure, teachers must find ways to assist these students to overcome the access obstacle. The only solution to this problem is to have students in need attend the school physically and arrange a teaching session depending on the guidelines. Essentially, these students will have less opportunity to thrive in the digital environment and less opportunity to grow and attain new information (Castells, 2010b). Approximately, students' population of 25% that have no access to the Internet at home ((Mongkhonvanit & Dipendra, 2021) can still gain their access by attending the schools and using the schools' resources to be connected to the network. Schools then become a place for attaining new knowledge beyond school hours of which libraries should be available for students after hours, long enough for education exploration and weekends.

Learning can be fun and exciting provided the environment is engaging that makes participation in class voluntarily and willingly. According to Grose (2014), students are placed in a passive learning mode that their roles are the receiving end of the information without an interaction. Therefore, the traditional teaching approach makes learning unattractive to them. Juke (2006) affirmed that students do not have short attention or lack of interest of education, they simply view old ways of teaching is outdated that is not reflective of the current digital learning environment. Digital immigrant educators then must consider the difference between them and the digital native learners so that co-learning can embrace interactive teaching and learning session. Embracing collaborative and supportive teaching and learning experience can build students' confidence in acquiring new knowledge and flourish even when making mistakes (Grose, 2014).

In the era of an overflow of information and the society of connectivity, educators must be creative in course design, course content, course delivery, and course assessments. The

design must be reflective of current technology integration and can account for time of crises. This is an alarming sign for all educators to transform into active learning and student-centered approach. Teaching through memorization should be diminishing and passive learning culture should be fading away. As Siemens (2005) mentioned that knowledge and learning are from a diversity of opinions, passive learning is considered outdated similar to other education theories preceding of connectivism. Culture change is no easy task and structural change of the education system is equivalently strenuous. That is why other actors are the forefront leaders of such change to illustrate that education transformation is possible. Khan Academy is among many well-known non-profit organizations that offers free education and assistance to both teachers and students. Personalized learning through Khan Academy allows students to learn at their own pace (Khan Academy, 2022). Khan Academy Thailand (2023) is a site with partial contents being translated and dubbed in Thai for Thai learners to learn the Khan's pedagogy. In addition to Khan Academy Thailand, Sakdibhornssup Foundation offers training programs for teachers and students (Sakdibhornssup Foundation, 2017). The foundation has been unpublicized and known only through the words of mouth. The training programs that the foundation offers for both educators and students are extensive and beneficial to all beneficiaries. Non-profit education effort is setting an example that a transformation of digital education is possible and can be realized.

Conclusions

Education has been on a worldwide forum as crucial social and economic aspects of workforce (Grose, 2014). To unleash from a passive teaching and learning approach that has been long established and adopted as a culture requires extensive and careful design of the new digital education system that all stakeholders including public, private, and non-profit sectors of education to unfold the new era of digital teaching and learning. The vision of transformative education in Thailand in written documents are promising in slowly transforming Thai education into the new digital era. However, in practice there are many obstacles that are not yet addressed and ignored through the implementation and execution.

Blended teaching and learning may be the solution to the education format applicable to Thailand. A right mix of physical attendance and online integration varies across grade 1 to grade 12. A continuing adjustment of teaching delivery, course contents, and assessments are fundamental to the digital nature of a teaching format. Educators are not always teachers and learners are not limited to learning. Roles can be switched as everyone takes part into the digital world of education. It is rather an exchange of knowledge that benefit both the provider and receiver of the information. Building a capable child with digital skillset can only pave a way to opportunity and growth as a child is growing into an adulthood. The capability of knowing where to look for information and attain one is crucial for a person to thrive and succeed in the digital world of education and profession.

While the government entities have been introducing various digital platforms for education, the practice and the usage of online resources are limited. Trainings to teachers and encouragement of digital platforms should be led by the responsible public entities to promote online teaching. The technical support should also be provided to teachers who are in need. Teachers then can feel more comfortable integrating technology into teaching and will eventually be able to adapt a right mix of teaching and learning model applicable to situations.

As students are more digital natives, education need to be restructured to take accounts of changing digital environments. The new curriculum and teaching methods implemented by the Ministry of Education should be reflective of the current digital environments of the society.

Authors' individual contribution: The authors are responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

Authors' contributions: The authors contributed equally to this study.

Declaration of conflicting interests: The authors declare that there is no conflict of interest.

References

Ashour, S., El-Refae, G. A., & Zaitoun, E. A. (2021). Post-pandemic higher education: perspectives from university leaders and educational experts in the United Arab Emirates. *Higher Education for the Future*, *8*(2), 219–238. https://journals.sage pub.com/doi/abs/10.1177/23476311211007261

Chu, S. K. W., Reynolds, R. B., Tavares, N. J., Notari, M., & Lee, C. W. Y. (2017). *21st century skills development through inquiry-based learning.* Singapore: Springer.

Dimopoulos, K., Koutsampelas, C., & Tsatsaroni, A. (2021). Home schooling through online teaching in the era of COVID-19: exploring the role of home-related factors that deepen educational inequalities across European societies. *European Educational Research Journal*, *20*(4), 479–497. doi:10.1177/14749041211023331

Lathan, J. (2023). Complete guide to student-centered vs teacher-centered learning. University of San Diego. Retrieved from https://onlinedegrees.sandiego.edu/teacher-centered-vs-student-centered-learning/

Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2020). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education, 27*(2), 141-156. doi:10.1177/1477971420947738

OECD. (2023). Shaping Digital Education: Enabling Factors for Quality, Equity and Efficiency. *OECD Publishing*. Retrieved from https://doi.org/10.1787/bac4dc9f-en

OECD. (2019). OECD Skills Outlook 2019: Thriving in a Digital World. *OECD Publishing*. Retrieved from https://doi.org/10.1787/df80bc12-en

OECD. (2018). Education Policy Outlook 2018: Putting Student Learning at the Centre, *OECD Publishing*. Retrieved from https://doi.org/10.1787/9789264301528-en

Pandit, D., & Agrawal, S. (2021). Exploring challenges of online education in covid times. *FIIB Business Review, 11*(3), 263-270. doi:10.1177/2319714520986254

Sudderth, A. (2023). *What is student centered learning and why is it important?* XQsuperschool. Retrieved from https://xqsuperschool.org/teaching-learning/what-is-student-centeredlearning/#:~:text=Defining%20Student%2DCentered%20 Learning&text=In%20student%2Dcentered%20learning%2C%20students,referred% 20to%20as%20personalized%20learning