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Trend Report of Higher Education & e-Learning of ASEAN

THAILAND

INDEX

Empowering Future Life-Long Education with Thai MOOC

Keywords #Thai MOOC #life long education

Assoc. Prof. Dr. Thapanee Thammetar, Asst. Prof. Dr. Anuchai Theeraroungchaisri, Prof. Dr. Jintavee Khlaisang, Dr. Vorasuang Duangchinda

Thai Cyber University Project has developed a long-term strategic plan for open education, will lead to sustainable learning society and promoting lifelong learning with quality open contents based on Thai MOOC.

01

Empowering Future Life-Long Education with Thai MOOC

Thailand Cyber University Project (TCU), under the Ministry of Higher Education Science Research and Innovation (MHESI) of Thailand, back in 2005, has developed a long-term strategic plan for open education that will lead to a sustainable learning society and promoting lifelong learning with quality open contents delivering through the means of ICT. This TCU's flagship project has been named "Thai MOOC", which is the national MOOC platform, and is a largest National Digital Learning Platform (NDLP) of Thailand since 2016.

Thai MOOC focuses primarily on sustainable ecology of lifelong learning (Upskill & Reskill) and has beztutions, public sectors, state enterprises, and individuals at national and international levels to achieve the goals. Currently, Thai MOOC offers nearly 1,000 in-demand courses which are developed and taught by over 100 institutions all over the country, under Thai MOOC standards and practices. The courses are available at no costs, and successful learners will earn a digital certificate of completion.

As of May 2021, Thai MOOC has over 993,000 registered learners, with is expected to exceed 1 million in the 3rd quarter of 2021. Currently, Thai MOOC is going through a series of notable upgrades and enhancement. Recent development and implementations include integration of Thai MOOC and partner MOOCs course directory, introduction of institution's own microsite on Thai MOOC Learning Management System (LMS), integration of national credit bank and citizen e-portfolio systems, as well as integration of national identification and credentials to the system.

For ease of understanding about Thai MOOC, figure 1 displays top ten most popular courses on Thai MOOC to date, while figure 2 predicts number of learners and certificates earned by the end of 2021. Figure 3 shows distribution of Thai MOOC course contributors, figure 4 depicts Thai MOOC Course Directory Conceptual Model. Figure 5 illustrates Thai MOOC course developer conceptual model, figure 6 reveals Thai MOOC LMS (Learning Management System) and digital certificate generation model, figure 7 uncovers Thai MOOC Credit Bank and e-Portfolio conceptual model, and lastly figure 8 portrays Thai MOOC Identity conceptual model.

In summary, Thai MOOC has emerged to become more than just a NDLP, rather as a key mechanism empowering future Life-Long education of Thailand. In the upcoming issues, we will investigate Thai MOOC and related functions in greater details.
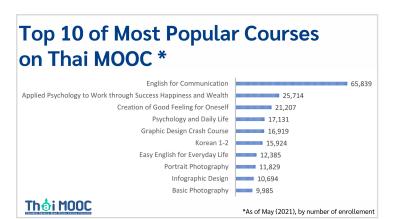
Figure 1: Top ten most popular courses on Thai MOOC (May 2021), Ranked by number of learners

Figure 2: Estimated number of learners and certificates earned by the end of 2021

Figure 3: Thai MOOC courses - distribution of contributors
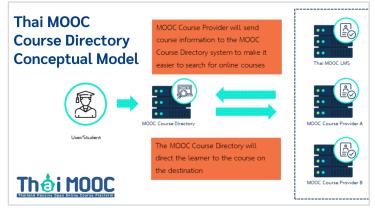
Figure 4: Course Directory Conceptual Model

Figure 5: Course Developer Conceptual Model

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Figure 7: Credit Bank and e-portfolio Conceptual Model

Figure 8: Identity Provider Conceptual Model

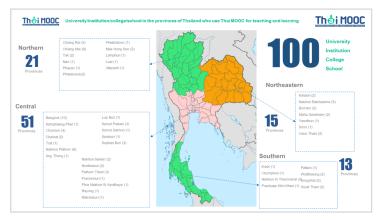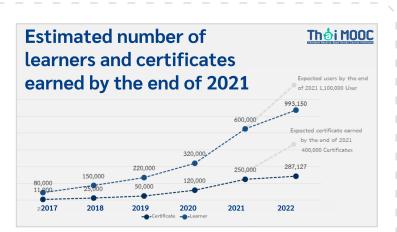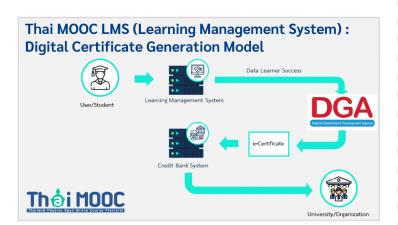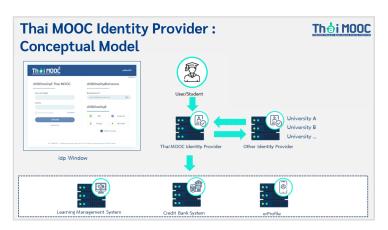# Empowering Future Life-Long Education with Thai MOOC : National Credit Bank System

Keywords #thaimooc #mooc #creditbank #lifelongeducation #lifelonglearning

Asst. Prof. Dr. Anuchai Theeraroungchaisri, Chulalongkorn University
Assoc. Prof. Dr. Thapanee Thammetar, Silpakorn University
Dr. Vorasuang Duangchinda, Sripatum University
and Prof. Dr. Jintavee Khlaisang, Chulalongkorn University

Since 2016, Thai MOOC has offered and by the end of 2021, Thai MOOC is expected to empower future Life-Long Education of the Thailand with National Credit Bank system.

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Empowering Future Life-Long Education with Thai MOOC : National Credit Bank System

Credit Bank is something like gradually depositing your money to your savings account, but it is a learning credit instead of cash. Nowadays, lifelong learning is becoming more and more popular because of rapidly increasing demands from people who wish to improve their skills and learn new things. Education could be in the form of a degree or non-degree program, from a university or even from outside the college, including learning MOOC courses from MOOC providers such as Thai MOOC and ACU-OER.

One interesting question deriving from learning a MOOC course is, what can successful learners do with their learning result apart from gaining self-satisfaction and knowledge. Wouldn't it be nice to digitally store their educational record collectively and systemically in a meaningful way for their future? Wouldn't it be nice to be able to utilize their portfolio of learning for a job application, or even as a part of university course exemptions towards a degree? The latter could be viewed as a "Credit Bank" system, leading to a reduction in program study time and early graduation.
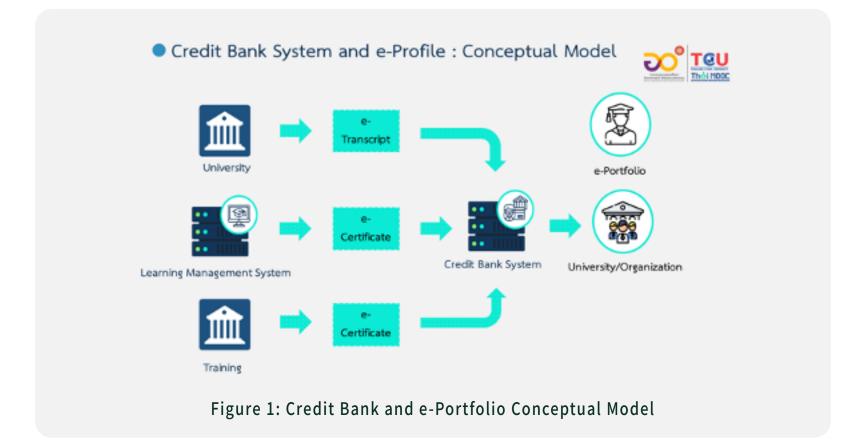
In addition, it would be very meaningful for learners at higher education level who wish to advance themselves in a higher-level degree program, to be eligible for transferring admission, thus taking fewer courses in class, focusing more on thesis instead.

With this in mind, the Ministry of Higher Education, Research, Science, and Innovation (MHESI) of Thailand recognizes that there should be a supporting system at the national level to help encourage lifelong learning by opening and expanding learning resources variously. This supporting system should also create ways to collect learning results and connect them with the national Credit Bank system, practically following the national policy set by MHESI.

Consequently, Thailand Cyber University Project (TCU) is developing an integrated platform, to gather all learning results and related information, and store them in a national Credit Bank system, to maximize the use of such information, allowing learners and institutions to make the best use of it. All universities in Thailand have been invited to take part in this national approach, in which they all will proceed under the same standard of national Credit Bank system and hence bringing advantage directly to the lifelong learners and all.

TCU's platform will allow educational institutions to easily verify learner's eligibility for credit transfer based on their educational portfolio. For the learners' side, there will be a mobile application under the concept of digital 'Credential Wallet', allowing them to self-check and review instantly and conveniently their academic records, credits gain from previous and current institutions, as well as date of completion. This will eventually eliminate the burden of paper-based evidence that could involve a very time-consuming steps at both ends to process and verify.

Three sources of learning credit can be deposited to the National Credit Bank. The learning credits received from formal education, such as undergraduate-graduate degree courses or received from non-formal education, such as training courses and the learning credits received from online education, such as MOOCs. Every learning credit from the same personal will be collected in their portfolio of learning called "e-Portfolio" as display in Figure 1.

Figure 1: Credit Bank and e-Portfolio Conceptual Model

The Credit Bank and e-Portfolio conceptual models envision the e-Portfolio system based on the National Credit Bank as an integral part of modern education in Thailand. Building upon the Thai MOOC system as a foundation and spinning off to individual institutions' digital learning platforms (or LMS) under the national standards and practices. This could effectively empower future Life-Long Education of the nation. The Credit Bank system will be launched in December 2021, so the future ahead is promising indeed.

🌐 Implications

Thailand Cyber University Project (TCU), under the Ministry of Higher Education Science Research and Innovation (MHESI) of Thailand, has developed a long-term strategic plan for open education that will lead to a sustainable learning society and promoting lifelong learning with quality open contents delivering through the means of ICT. Thai MOOC has been introduced since 2016 as a largest National Digital Learning Platform (NDLP) serving the purposes. By the end of 2021, it is expected that National Credit Bank system will be integrated to Thai MOOC.

Three sources of learning credit can be deposited to the National Credit Bank. The learning credits received from formal education, such as undergraduate-graduate degree courses or received from non-formal education, such as training courses and the learning credits received from online education, such as MOOCs. Every learning credit from the same personal will be collected in their portfolio of learning called "e-Portfolio".

The Credit Bank and e-Portfolio conceptual models envision the e-Portfolio system based on the National Credit Bank as an integral part of modern education in Thailand.

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Empowering Future Life-Long Education with Thai MOOC : Thai MOOC Directory

Keywords #thaimooc #mooc #directory #openid #lifelongeducation #lifelonglearning

Asst. Prof. Dr. Anuchai Theeraroungchaisri, Chulalongkorn University
Assoc. Prof. Dr. Thapanee Thammetar, Silpakorn University
Dr. Vorasuang Duangchinda, Sripatum University
and Prof. Dr. Jintavee Khlaisang, Chulalongkorn University

Thai MOOC has developed a dedicated system under a codename MOOC Course Directory or MCD, enabling learners to easily search for relevant online MOOC courses across "trusted platforms" by self, in the way they would do when they Google for information they wish for. What it takes to create the MCD and will the benefits go beyond Thai MOOC?

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Empowering Future Life-Long Education with Thai MOOC : Thai MOOC Directory

According to current Thai MOOC analysis, from about 1.2 million registered members, over 700,000 of them are "active learners" (July 2021). Surely, each of them may have individual preferences for courses they wish to learn. The question is, as there are thousands of MOOC courses available from many MOOC course provides, how can they find relevant courses? It should not be like finding a pin drop in an ocean.

Thai MOOC has developed a dedicated system under a codename MOOC Course Directory or MCD, enabling learners easily search for relevant online MOOC courses across "trusted platforms" by self, in the way they would do when they Google for information they wish for.

The MCD divides courses on Thai MOOC (as well as trusted partners) into 12 categories, covering all academic fields. A course seeker can perform a search task in an easy way. For example, if they wish to learn about chemistry and search for it, the results will show all the courses related to chemistry on Thai MOOC, plus relevant courses on other partner MOOC platforms as well.

Thai MOOC's partner institutions and organizations who have been working with Thai MOOC for course development on Thai MOOC platform, aside from getting the opportunity to promote their organization under their course's reputation, their courses will greatly benefit a lot of learners in general as it enhances a variety of choices for the learners' course selection.

The MOOC Course Directory or MCD comes with a dedicated service called Microsite. Any partner university, institution, or organization could have their very own microsite under ThaiMOOC.org, with their own courses on Thai MOOC, and even with other courses on Thai MOOC as well. Figure 1 displays SPU MOOC on Thai MOOC, housing 7 SPU owned Thai MOOC courses but within SPU microsite (http://spu.thaimooc.org).
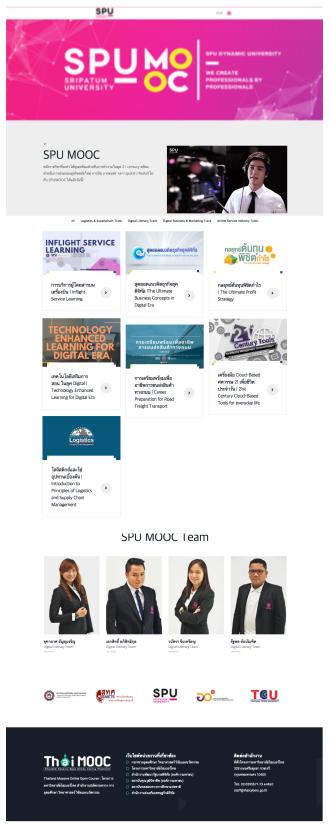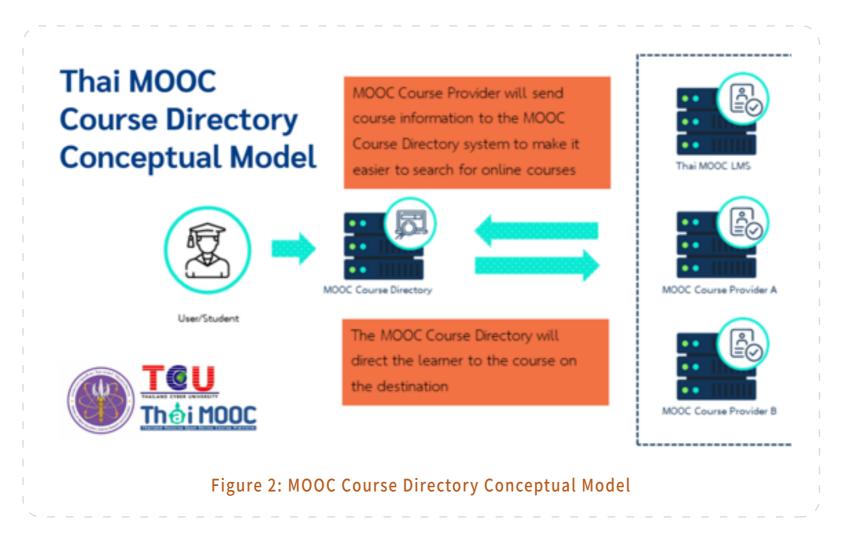

Figure 1: Example of Thai MOOC Micro Site for Sripatum University (SPU) at http://spu.thaimooc.org/

As can be seen in figure 1, SPU MOOC comprises of 7 Thai MOOC courses. They are grouped into 4 tracks, which are: 1) Digital Literacy track (Technology Enhanced Learning, and Cloud-Based tools for daily life in 21st Century), 2) Logistics & Supply chain track (Career Preparation for Road Freight Transport, and Introduction to Principles of Logistics and Supply Chain Management), Digital Business & Marketing Track (The Ultimate Business Concepts in Digital Era, and The Ultimate Profit Strategy), and Airline Service Industry Track (Inflight Service Learning).

Thai MOOC microsites can be designed to work in the same way with the organization's website system, including dedicated graphics to match with identity of the organization. With this, each organization have the freedom of website customization, while Thai MOOC will be responsible for the back-office system and necessary supports which the partner may need. As a result, the partner can focus on quality of learning materials and teaching and learning process for maximum benefits to the learners.

Universities or organizations who wish to have their Microsite on Thai MOOC can contact Thai MOOC directory and form an official partnership (through Memorandum of Understanding : MOU) with Thai MOOC and then they can have their Microsite at no costs. In each Microsite, all courses listed within Thai MOOC MCD may be added, no matter from which university or which organization through the MOOC Course Directory depicts in figure 2.

Figure 2: MOOC Course Directory Conceptual Model
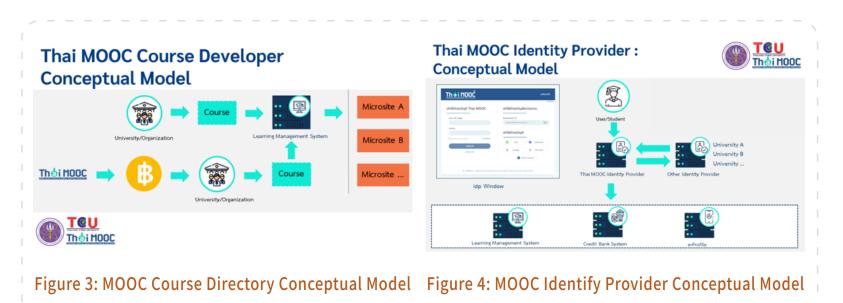
Apart from Thai MOOC MCD, there is also another sibling service, under the codename "OPEN ID". Open ID is an e-Authentication system, developed by Digital Government Development Agency (DGA). The Open ID enables learners to be able to login to various platforms by using just one login. This is in the same way as we use a Google account, as when we login through Google account, we are also logging in to YouTube account as well without having to logging in twice or more.

Logging in through the Open ID system allows users access other organization's service system just by one login. For examples, Thai RDU Application, Thai Lands maps, and Food and Drug Administration Website.

 For Thai MOOC, users who use their educational institution's account that has Roaming Account integration with the Open ID API, they can simply and conveniently login to Thai MOOC with their original account.

As for integrity and trust-worthiness of the Open ID system, new users will be required to identify themselves through verification process which will cross check their credentials with the national database of the Department of Provincial Administration, as well as basic information including their full names and national ID number. In addition, to avoid identity thieves who may use another person's personal identifying information to make an imposter account, there is an e-KYC (Electronic Know Your Customer) procedure, which includes facial recognition technology, for the safety and inspection process along the way. Figure 3 elaborates the MOOC Course Developer Conceptual Model, and figure 4 explains the MOOC Identify Provider Conceptual Model.

With the introduction of MCD and Open ID, Thai MOOC is now ready for rapid expansion in the ways that may not have been possible before. Thai MOOC is now ready to serve as the biggest hub of lifelong learning of Thailand, for people of all generations, and for the future of the nation.

In the next episode, we will review Thai MOOCs Community, with the focus on national & international relation with other MOOCs providers.

Figure 3: MOOC Course Directory Conceptual Model   Figure 4: MOOC Identify Provider Conceptual Model

🌐 Implications

Thai MOOC now offers Microsite for all partners at no costs, allowing personalized user interface and courses listing based on MOOC Course Directory (MCD), which catalogues quality MOOC courses from within Thai MOOC and trusted MOOC providers. In addition, Thai MOOC has been utilizing the Open ID system enabling seamless single sign-on process across participating services.

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Empowering Future Life-Long Education with Thai MOOC: Power of Network Engagement
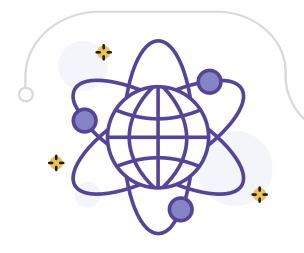
Keywords #thaimooc #mooc #network #engagement #lifelongeducation #lifelonglearning

Prof. Dr. Jintavee Khlaisang, Chulalongkorn University
Dr. Vorasuang Duangchinda, Sripatum University
Assoc. Prof. Dr. Thapanee Thammetar, Silpakorn University
and Asst. Prof. Dr. Anuchai Theeraroungchaisri, Chulalongkorn University

Thai MOOC, as part of the Thai Cyber University (TCU) project, has created open online courses platform that brought together universities to empower open online learning since 2017. Over time, Thai MOOC has improved, developed, and transformed into Thailand's major Massive Open Online Courses platform, to support wider number of learners with various learning demands. Similar to other countries, Thai MOOC is considered a national digital learning platform for lifelong learning and is supported by the Ministry of Higher Education, Science, Research and Innovation (MHESI). The empowerment of the platform through a national and international networks and learning communities have been included in the current TCU operational plan (2017-2021).

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Empowering Future Life-Long Education with Thai MOOC: Power of Network Engagement

With the power of network engagement at the national level, Thai MOOC has been collaborating with over 100 universities as well as public and private sectors across Thailand for MOOC course creation and utilization via the host universities (as shown in figure 1). While at the international level, our strong partnership with major MOOCs and OER providers around the world, allows Thai MOOC to collaboratively design and exchange courses with other major MOOC platforms and universities with ASEAN and other countries in Asia, Europe, and the US. This includes ASEAN Cyber University (ACU) establishment project, and K-MOOC from South Korea, JMOOC from Japan, XuetangX from China, Federica Web Learning rom Italy, and recently MERLOT.org from the US. Primarily, the current operational plan of Thai MOOC focuses on technology compatibility and content exchanges between the partners.

Figure 1: Network engagement at the national level
(89 universities across countries)

Figure 2: Network engagement at the national and
international levels
(100+ universities, public, and private sectors)

Figure 3 : Global MOOCs and Life-Long Learning Policy Update 2020
(Presented by Secretary-General of ACU during the TCU International e-Learning Conference 2020)

In order to expand Thai MOOC partnership at global stage, Thai MOOC has actively participated in international conferences to present the project, and to exchange knowledge focusing on technology compatibility and content exchanges between the partners.

Examples of formal cooperation includes signing memorandum of understanding with various MOOC platforms across the globe. (Figures 4-6), follow by several real actions such as experts meeting, workshops, and content sharing.

Figure 4 : Signing trilateral Memorandum of Understanding JMOOC, K-MOOC, and Thai MOOC on
March 3, 2017

Figure 5 : After signing MOU, there were several expert meetings, such as
Nano Degrees meeting (January 15-16, 2018) and Credit Bank System (March 2020).

Figure 6 : Example of a result of MOU signing is in a form of exchanging a course between JMOOC and
Thai MOOC, K-MOOC and Thai MOOC. For instance, a course titled K-MOOC001, and K-MOOC002 | A bridge
to the world: Korean Language for Beginners I and II from Sungkyunkwan University on Thai MOOC.

Continuing on the strong global foundation, Thai MOOC has continued to grow our number of partner at international levels, including ASEAN Cyber University (ACU) establishment project, as well as China, Taiwan, Italy, and the United States. Examples of ongoing collaboration at global stage includes course exchanges with XuetangX such as New Horizons in Chinese Philosophy, Exploring Psychology's Core Concepts, Water and Wastewater Treatment Engineering: Biochemical Technology. In return, Thai MOOC has supplied XuetangX with quality Thai courses including, Northern Thai Food, Cultural Management for Tourism, Special Interest Tourism, Data Science Essential and Applications. Figures 7-9 show the Global MOOC Conference was held at Tsinghua University from December 9-11, 2020. Thai MOOC participated (online) as the Executive Committee Member of Global MOOC Aliiance, showcasing the exchange courses.
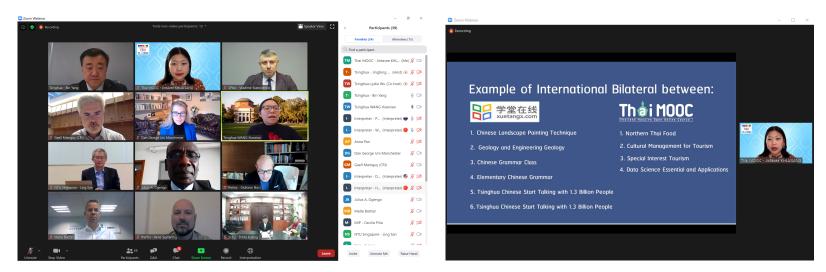
Figure 7 : Global MOOC Alliance Preparatory Meeting on December 1, 2020

Figure 8 : iCourse and xuetangX held a sub-forum for MOOC Platforms on December 9, 2020.
Thai MOOC was invited to make a presentation and to participate on a panel with
FutureLearn (UK), iCourse (China), xuetangX (China).
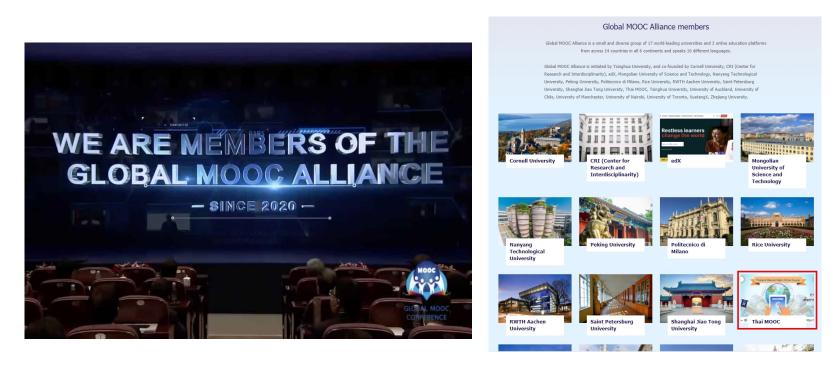
Figure 9 : The Official Launch of Global MOOC Alliance on December 11, 2020, with Thai MOOC on the video
for the open ceremony. Thai MOOC as a member,
being included on website https://mooc.global/#members

Various cooperation has derived as a result of attending and presenting in several conferences, for example, the collaboration with the University of Naples Federico II occurring by meeting at the EMOOC Forum resulting in an academic collaboration in the form of MOU to collaborate and to exchange courses from Federica Web Learning to Thai MOOC.

Figure 10 : Attending and presenting at the European MOOCs Stakeholder Summit 2019.
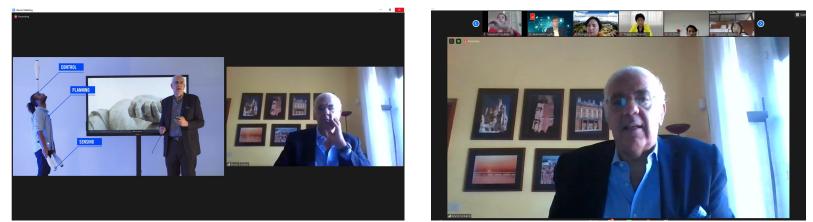

Figure 11 : Professor Bruno, owner of Robotic courese from Federica Web Learning
was one of keynote speakers at TCU IEC hosted by ThaiMOOC, 2020.

There are also other forms of international collaborations between Thai MOOC and other MOOCs such as exchanging ideas, co-creating online courses, and selecting foreign online courses that interest Thai people. Common form of collaboration includes adding Thai subtitles to the partner's video contents, allowing Thai learners to have a deeper understanding on the content. Also, Thai MOOC courses can now be searched from other global platforms such as MERLOT (Figure 12).

Figure 12 : Courses on ThaiMOOC can be searched from MERLOT,
making it possible to expand the access to content for maximum benefit.

Recently, Thai MOOC has launched a pilot project with Sukhothai Thammathirat Open University (STOU), Institutions of Community Colleges (ICC), and Thailand Professional Qualification Institute (TPQI) which synthesize a collaboration and co-creation of competency-based curriculum and courses. Thai MOOC plays a role as a coordinator and supported to connect with other MOOCs, by approaching partner's courses that may have similar courses, and then connect them together to form a working partnership. Therefore, Thai people can learn from a variety of perspectives at international level.
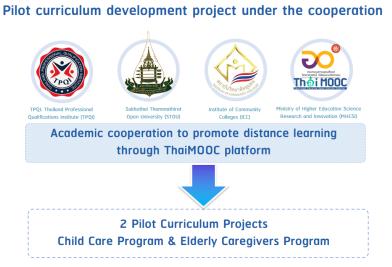
Figure 13 : The pilot project with Sukhothai Thammathirat Open University, Institutions of Community Colleges, Thailand Professional Qualification Institute, and ThaiMOOC to create competency-based curriculum via ThaiMOOC platform.
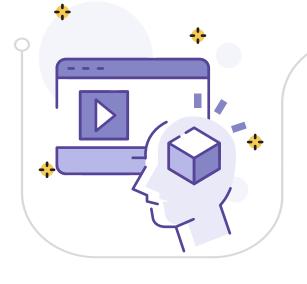
Figure 14 : National Cheng Kung University Micro site on ThaiMOOC platform

Figure 15 : A series of course on elderly care that has included in the pilot project, as one of the learning contents, launched by the collaboration of National Cheng Kung University, Taiwan, and Sukhothai Thammathirat Open University, Thailand.

Furthermore, since Thai MOOC has been developed based on Open Edx, an open source MOOC platform, it is simple to exchange courses between other MOOC providers. Compatibility wise, it is easy to transfer Thai MOOC courses to other platforms, and vise-versa.

Perhaps, the next challenges facing Thai MOOC is on how to close the language barrier gap. Currently, Thai MOOC has investigated on the use of AI technology to translate content from other language into Thai. This could enable precise translation of the MOOC courses, and ultimately, increasing level and number of cooperation between MOOC platforms. Hopefully number of exchanged courses will massively increase and paving the ways for other Thai MOOC features such as credit bank and ePortfolio systems in the near future.

⊕ Implications

Empowering Future Life-Long Education with Thai MOOC with the focus on power of network engagement at both national and international levels, Thai MOOC focuses on technology compatibility and content exchanges between the partners. This leads to the opportunity for learners to really involve in lifelong learning ecosystem from other parts of the world. This could ultimately increasing level and number of cooperation between MOOC platforms. Hopefully number of exchanged courses will massively increase and paving the ways for other Thai MOOC features such as credit bank and ePortfolio systems in the near future.

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Empowering Future Life-Long Education with Thai MOOC : University Guidelines for Online Learning During COVID-19

Keywords #thaimooc #mooc #covid19 #onlinelearning #guidelines #lifelonglearning

Dr. Vorasuang Duangchinda, Sripatum University
Prof. Dr. Jintavee Khlaisang, Chulalongkorn University
Assoc. Prof. Dr. Thapanee Thammetar, Silpakorn University
and Asst. Prof. Dr. Anuchai Theeraroungchaisri, Chulalongkorn University

The pandemic in Thailand, has impacted Thai education in all aspects, including students, teachers, and academic institutions. University Guidelines for Online Learning During Covid-19 has emerged as a result with the help of Thai MOOC. This article addresses adoption process of education and digital transformation during this crisis. A case study of U2T project, a flagship national lifelong learning project with Thai MOOC as the backbone, has been a great example on how the government, educational institutions, and communities synergise hand-in-hand for the maximum benefit of the nation regarding an online way for upskill and reskill lifelong learners during the crisis, resulting in over 60,000 employment in 2021.

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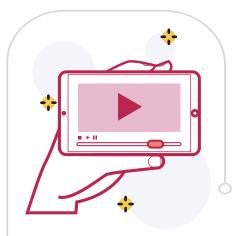
Empowering Future Life-Long Education with Thai MOOC: University Guidelines for Online Learning During Covid-19

Prior to the spread of Covid-19, the majority of higher education institutions in Thailand primarily taught on-site. However, given the current situation, lecturers and students cannot conduct classes normally, adhering to safety measures to prevent the virus from spreading. Education, on the other hand, is far too important to be abandoned. As a result, universities, institutions, and lecturers work to adapt themselves and their teaching methods in order to keep education moving forward on an institutional, national, and international scale. As a result, Thai MOOC, which is now Thailand's largest national digital learning platform (NDLP), has notably and increasingly become much more important fostering higher education as well as lifelong learning in Thailand.

Since 2000, the adaptation of higher education institutions begins with the implementation of an online classes policy in universities. It aims to keep classes going by focusing on interactions between lecturers and students as well as between students themselves. Then they start using the Blended Classroom approach to design classes, create supplements, and set different forms of evaluation (Khlaisang and Likhitdamrongkiat, 2015) and (Koraneekij and Khlaisang, 2015).

At first, universities, lecturers, and students were not used to online classes. As a result, universities work to support necessities and basic skills, so that online classes can be conveniently conducted, such as hosting workshops about online classes, providing studios to record classes, and seeking technological devices and popular platforms, such as Zoom, Microsoft Teams, Google Classroom, Moodle, LMS, and so on. At first, online courses encountered a variety of issues. However, lecturers and students gradually become accustomed to new technology and, most importantly, improve their self-learning abilities. As a result, students begin to study outside of class and become more self-responsible and self-reliant (Ministry of Higher Education, 2021a) (Ministry of Higher Education, 2021b).
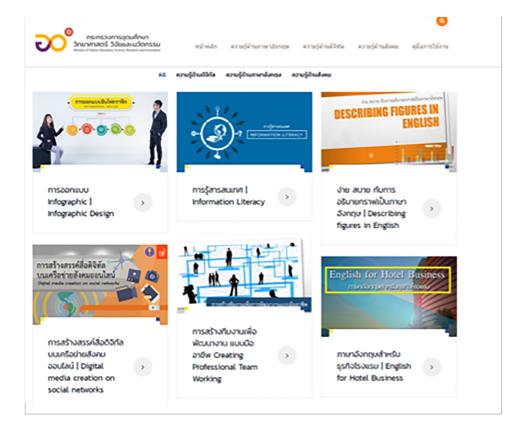
Aside from universities that have recently adapted to online classes, there are universities that already practice online classes primarily or concurrently. As a result, these experienced universities can quickly adapt to the new teaching style and serve as coaches or role models for online education. They provide both technological and pedagogical guideline and supervise other universities, organizing workshops, training lecturers and students to use online learning technology. They also develop teaching and evaluation approaches and design new teaching models inspired from discussions between faculties (schools) (Duangchinda, 2021).

Consequently, during Covid-19, those experienced universities are primarily quicker to keep classes going by using platforms like LMS, YouTube, Facebook, mobile applications, e-book, etc. and kept their classes on going with minimum disruption. Therefore, during Covid-19, many national and international students have been able to continue their study and take online exams as planned (Duangchinda and Lertpaitoonpan, 2019) (Duangchinda, Khlaisang, and Theeraroungchaisri, 2020) (Duangchinda, 2020).

In 2021, online learning has become increasingly vital during second wave of Covid-19. Universities and academic institutions start to build connections with more partners for exchanging and sharing knowledge which is the core principle of higher education and lifelong learning development. They collaborate to create an online learning system, held teaching workshops with special lecturers for institutions both inside and outside Thailand, and invest in online learning software. They also launched Open Educational Resources (OER) to exchange and share resources, reducing time and maximizing the benefits for universities, students, and network partners (Khaisang, 2021).

As the Covid-19 pandemic has caused a very disturbing unemployment problem around the country, Thai MOOC has been utilized as a mechanism to resolve this national crisis. The government, by Ministry of Higher Education, Science, Research and Innovation (MHESI) has initiated a national project under the code name "University to Tambon: U2T." (https://u2t.thaimooc.org) (Ministry of Higher Education, 2021a) (Ministry of Higher Education, 2021b).

The project brings universities from nine regions across the country together, to help develop communities in over 3,000 sub-districts throughout the country. Learners of the said target groups can conveniently upskill or reskill based on their preferences via Thai MOOC platform. U2T selected courses from Thai MOOC that fit its three goals: English literacy, digital literacy, and social literacy respectively. Thai MOOC therefore, has been the backbone platform supporting U2T project. As a result, over 60,000 successful learners have been employed, and continue to use Thai MOOC for their career advancement in lifelong learning eco-system.

Successful U2T learners have made a great contribution to their local community, such as in the areas of as tourism and cultural arts. This has kept our nation going in term of human resource development, employment, as well as sustainable development of the communities.

Figure 1 : Example page showing various U2T courses on Thai MOOC

The Covid-19 Crisis in Thailand, has highly impacted Thai education in all aspects, including students, teachers, and academic institutions. The network of academic institutions collaborates to adapt to the use of online teaching in a variety of formats, resulting in the development of new pedagogical and technological models that will allow education to drive through the crisis and develop further at the community, national, and international levels. This has been one of the most noticeable digital transformation of Thai education that has never happened before.

U2T has been a leading example of how the government, educational institutions, and communities synergise hand-in-hand for the benefit of the nation. This digital transformation has led to a new way of teaching and learning that surely vital to the educational landscape. It is believed that once the Covid-19 has been under controlled, the ways for teaching and learning will never be the same, and Thai MOOC could effectively be a reference for future way of learning spectrum for years to come.

🌐 Implications

Thai MOOC has been utilized as a backbone for synergizing cooperation between the government, educational institutions, and communities for the maximum benefit of the nation during the crisis by offering online continuing professional development to upskill and reskill the people for employment during the pandemic. Reusing the existing contents at the right time without having to re-create any course have been vital to the success of this transformation. As a result, over 60,000 employment have been achieved as a result in 2021.

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Empowering Future Life-Long Education with Thai MOOC: The New Normal Online Education Guidelines for Teachers During COVID-19

Keywords #thaimooc #mooc #covid-19 #onlinelearning #guidelines #lifelonglearning

Dr. Vorasuang Duangchinda, Sripatum University
Prof. Dr. Jintavee Khlaisang, Chulalongkorn University
Assoc. Prof. Dr. Thapanee Thammetar, Silpakorn University
and Asst. Prof. Dr. Anuchai Theeraroungchaisri, Chulalongkorn University

The wide-spread COVID-19 in Thailand has caused many institutions to conduct only online classes, therefore, key-drivers such as teachers are responsible for redesigning and implementing from on-site classrooms to be in online mode, to survive during this digital disruption epidemic. The main challenge is how to keep the learners engaged in this new learning environment. This paper discuss the implications ramifications of the process, which has become a new normal online education guidelines for teachers during COVID-19.

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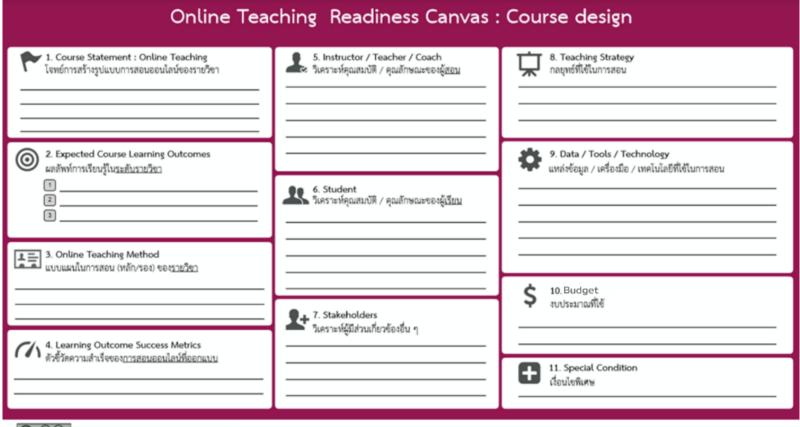
Empowering Future Life-Long Education with Thai MOOC : The New Normal Online Education Guidelines for Teachers During COVID-19

As a result of the wide-spread COVID-19, many institutions have adapted to conducting classes primarily online, therefore, key-drivers such as teachers are responsible for redesigning and implementing from on-site classrooms to be in online mode, to survive during this digital disruption epidemic. The main challenge is how to keep the learners engaged in this new learning environment.

Teachers as a key-driver of the process, must transform themselves in various ways. They must concentrate on instructional designing process, content creation process, active learning and teaching process, focusing on both formative and summative assessment process, as well as the evident-based evaluation process; in the way that they might had never done before and with a very intensify manner. The goal is to maintain learning outcome achievement despite being in online environment. The learners should be able to attain what they wish to learn from, and being able to apply the new competencies in their profession.
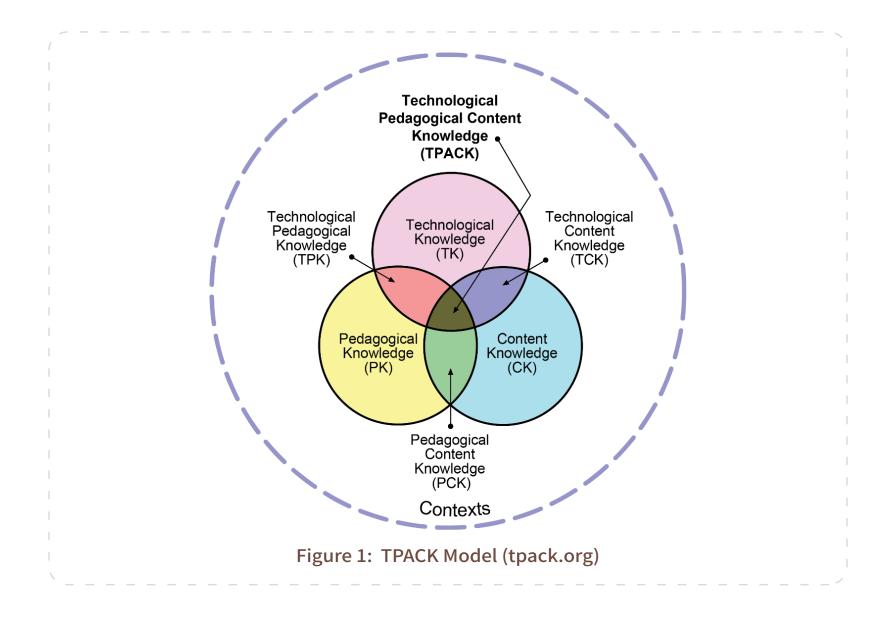
Due to the rapid transition of physical to online classroom, in the early stages, both teachers and learners might have encountered difficulties with computer-equipment, internet, technical skills, and places. However, these difficulties have eventually enabled learning and adaptation to occur in a much faster basis. Online classroom requires cooperation from all stakeholders, including teachers, learners, educational institutions, and even workplace.

Figure 1: Course design Canvas : Created by Asst. Prof. Dr. Rattasapa Kankaew (Sripatum University) and ↓ Presented during Thai MOOC Talk 2021: Empowering the Next Normal Online Education (EP.7), ↓ which aired on Thai MOOC's Facebook page on June 2, 2021.
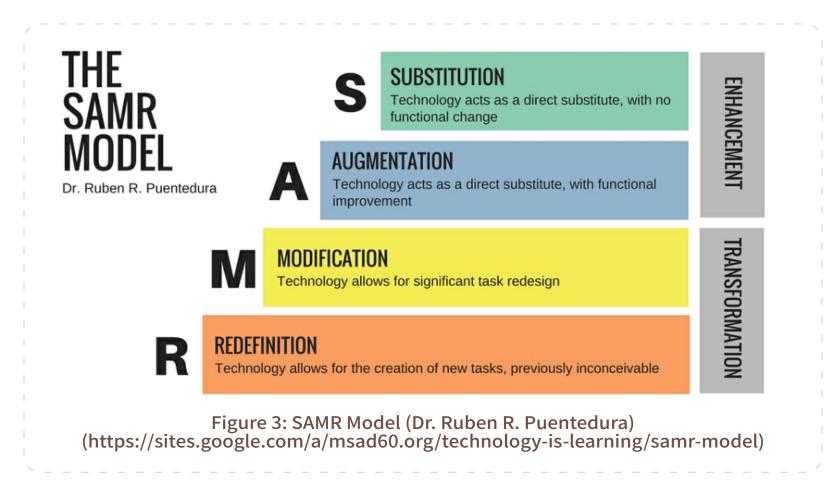
Teachers are at the forefront of the modification and design of online education. They must be receptive, active, and attentive to learners' circumstances. The first thing a teacher should do is establish clear objectives. Teachers must always consider what and how much their learners can do. Then the teachers can design his or her classroom, including activities, teaching methods, and assessment. Figure 1 shows a course design canvas that could depict such scenario. This canvas is created by Assistant Professor Dr. Rattasapa Kankaew of Sripatum University, an awarded role model teacher by the Professional and Organizational Development Network of Thailand Higher Education. The canvas was presented during Thai MOOC Talk 2021 live show, entitled "Empowering next normal online education" episode 7, which as aired on June 1, 2021 via Thai-MOOC Facebook page.

Figure 1: TPACK Model (tpack.org)
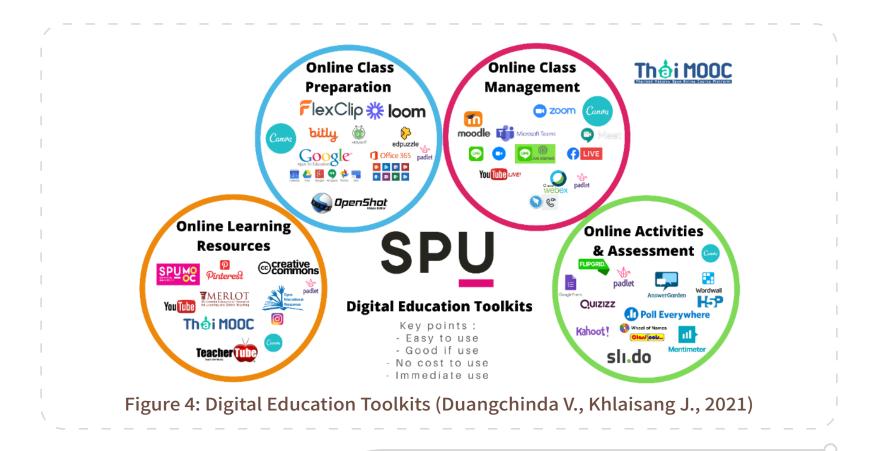
According to the classic TPACK model (figure 2), a competent teacher should have combination of 3 knowledge domains within his or herself. The 3 domains are 1) Content knowledge, 2) Pedagogy knowledge, and 3) Technology knowledge. Therefore, after de signing the course, the next critical step is to pick up digital tools. Choosing the right and balance digital tools for the selected pedagogy and contents are not so easy. The SAMR model (as in Figure 3) explains how one could utilize a digital tool in various steps of teaching process. The easiest level might be to substitute (S) a teaching activity with a digital tool, then the next step is to augment (A) the function using a digital tool, followed by modify the function with digital tool (M), and ultimately redefine the process using digital tool (R).

Figure 3: SAMR Model (Dr. Ruben R. Puentedura)
(https://sites.google.com/a/msad60.org/technology-is-learning/samr-model)

It is a challenge for online educators to investigate methods and technology that can be used to promote more successful online teaching and learning. In this era of online education, there are numerous media and technology resources available. The following model purposes 4 categories of digital tools supporting (or enhancing) teaching and learning process, which are 1) Online Learning Resources, 2) Online Class Preparation, 3) Online Class Management, and 4) Online Activities & Assessment.

Teachers are encouraged to continually study new tools based on the preparedness of learners' equipment. Some intriguing applications and tools for online education that are tailored to specific objectives and learning processes, as shown in the figures 2 and 3. The tools selected are also appeared in recommended tools set that are widely used in many countries as in the Jane Heart's research list (2021 at https://c4lpt.co.uk/). Example of real utilization of the tools set is from Sripatum University where all the tools displayed in the 4 categories are used on a common basis.

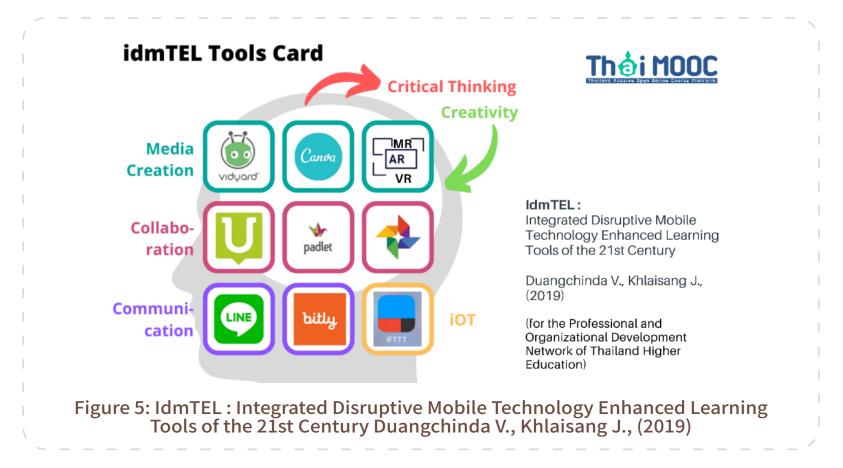**Figure 4: Digital Education Toolkits (Duangchinda V., Khlaisang J., 2021)**

As learner's engagement is an important part of only teaching and learning process, various kinds of interactive digital tools and activity tools play a major role in this environment. The interactions between the learners themselves, between the learners and devices, as well as between the learners and the teachers; lead to effective learning engagement and will derive in learning outcomes achievement.

In self-paced learning, a way to promote learners' engagement is to use quizzing tools such as Quizziz, Kahoot, Mentimeter, H5P, FlipGrid, Slido, etc. For the collaborative learning, there are online whiteboards available such as Padlet, Miro, Mural, etc. In fact, these tools can be used to support both synchronous and asynchronous learning that teachers can select and design to make the class more engaging without a limitation of time and place, and with a greater level of flexibility in utilization.

As for pedagogical strategies to encourage learners to enjoy the above tools for their maximum learning engagement, the teacher should consider combination of active pedagogical approaches. For examples : assigning project-based and problem-based learning activities that require learners to solve problems and collaborate in groups, organizing interactive learning activities, and developing real-world activities and authentic assessment through observation and prove by learning evidences. A set of digital tools that could foster this kind of scenario is from the IdmTEL : Integrated Disruptive Mobile Technology Enhanced Learning Tools of the 21st Century (Duangchinda V., Khlaisang J., 2019) in which the tools are divided into 4 categories : 1) Media creation, 2) Collaboration, 3) Communication, and 4) Internet of things. The IdmTEL can be applied to boost level of creativity and critical thinking of the learners, as displayed in figure 5.

Figure 5: IdmTEL : Integrated Disruptive Mobile Technology Enhanced Learning Tools of the 21st Century Duangchinda V., Khlaisang J., (2019)
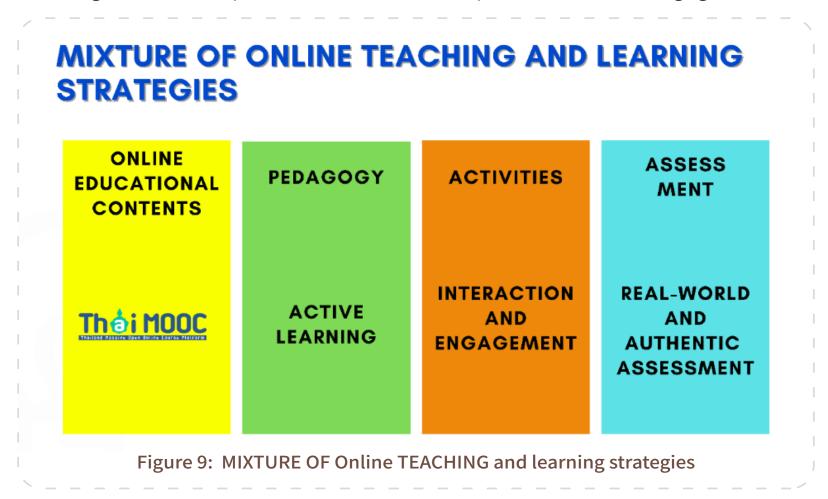
To evaluate online learning, the 3 principal concepts of 1) assessment of learning (AoL), 2) assessment as learning (AaL), and 3) assessment for learning (AfL) should all be considered. In fact, the AoL focuses on summative evaluation by assessing learners' learning at the end by comparing it against the Course Learning Outcomes (CLO). This is considered as a 'High stakes' kind of assessment for online learning environment, which learners and teachers are not being at the same physical place.

In contrast, the AaL and the AfL focus primarily on online learning process. Since learners can be a part of the assessment process such as design and developing its rubric criteria for a class project, in-line with the course objectives, which include a clear and transparent evaluation criterion that are presented on time with detailed scores and time spent on the assignment. The results of the evaluation can be used to develop further learning. This kind of process reflets a formative assessment method which the teachers will have a chance to monitor the learner's ongoing process and provide recommendation accordingly. On the other hand, the teachers can get valuable feedback from the learners for improving their teaching performance. Figure 6, 7, and 8 explain the concept of assessment of learning (AoL), assessment as learning (AaL), and assessment for learning (AfL) in relation to summative and formative assessment.

Figure 6: Assessment "OF", "FOR", "AS" Learning: the Principle

Figure 7: Authentic Assessment "OF", "FOR", "AS" Learning

Figure 8: National Forum for the Enhancement of Teaching andLearning in Higher Education, Ireland (https://www.teachingandlearning.ie/our-priorities/learner-success/assessment-of-for-as-learning/#1540351484344-0273bc52-978d)

In conclusion, the new normal online education guidelines for teachers during COVID-19 covers broad spectrum of teaching and learning process. As can be seen from figure 9, a good mix of online teaching and learning strategies would eventually lead to ultimate outcome of education, which as achieving the learning outcome as perceived with the best possible level of engagement.

MIXTURE OF ONLINE TEACHING AND LEARNING STRATEGIES

ONLINE EDUCATIONAL CONTENTS	PEDAGOGY	ACTIVITIES	ASSESSMENT
Thai MOOC	ACTIVE LEARNING	INTERACTION AND ENGAGEMENT	REAL-WORLD AND AUTHENTIC ASSESSMENT

Figure 9: MIXTURE OF Online TEACHING and learning strategies

Although teachers could develop contents of their own, but during the pandemic it is a new norm to simply look for quality online educational contents that are available freely for reuse such as from Thai MOOC. From the pedagogical perspective, online active learning pedagogy is a vital strategy that could determine level of engagement between the learners, with the learners, and between the stakeholders as choosing the right pedagogy would impact on the level of interactivity and engagement of the learners. And as for the assessment, it is important to incorporate the use of real-world and authentic assessment methods, in order to ascertain the performance of the learners as per the course objectives as desired.

⊕ Implications

Thai MOOC is an important online repository with a huge number of various kinds of educational contents. Although Thai MOOC has been utilized heavily as a result of COVID-19, however a right mix of online teaching and learning strategies would be the key to Empowering Future Life-Long Education of Thailand.

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Empowering Future Life-Long Education with Thai MOOC : Thai MOOC's Role in New Normal Online Education and Beyond

Keywords #thaimooc #mooc #covid19 #onlinelearning #guidelines #lifelonglearning

Assoc. Prof. Dr. Thapanee Thammetar, Silpakorn University
Dr. Vorasuang Duangchinda, Sripatum University
Assoc. Prof. Dr. Anuchai Theeraroungchaisri, Chulalongkorn University
and Prof. Dr. Jintavee Khlaisang, Chulalongkorn University

Thai MOOC has been empowering future life-long learning for Thailand since 2017. It's inclusion in strategic planning of the Office of National Higher Education Science Research and Innovation Policy Council (NXPO) will surely foster the new normal online education and beyond.

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Empowering Future Life-Long Education with Thai MOOC : Thai MOOC's Role in New Normal Online Education and Beyond

COVID-19 has revealed the potential of online education that both instructors and learners are adapting to it in the way that was not even possible before, regardless of their previous experience and preferences for online education. Besides, there is a growing tendency towards incorporating online education as part of the future's new normal education and beyond. The statistics from Thai MOOC show significant growth of members and certificates that were issued from the platform as displays in figure 1.
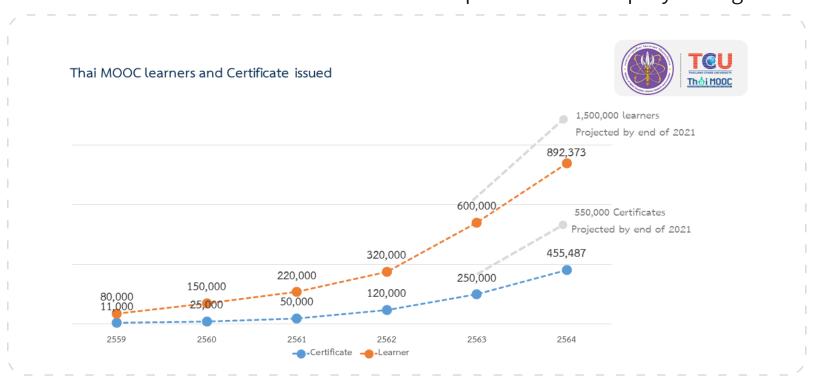

Figure 1: Number of members and certificates issues from Thai MOOC platform during 2016-2021

Even if the COVID-19 pandemic were to end, the teaching and learning in totally physical classrooms might never be the same as before the pandemic. The online classroom will continue to be conducted since both teachers and learners have grown accustomed to it.

The Office of National Higher Education Science Research and Innovation Policy Council (NXPO) announced the Higher Education, Science, Research and Innovation Strategic Direction for Post-COVID-19 Recovery that consists of 6 strategic directions.

Figure 2: Higher Education, Science, Research and Innovation Strategic Direction for Post-COVID-19 Recovery (NXPO, 2021)

The fifth strategic direction, "Reinventing Higher Education and Human Capital", emphasizes on enabling higher education to prepare the workforce with knowledge and skills in demand for social and economic development, Cooperative education model - whereby a university offers classroom-based education in combination with practical work experience in the real industry or community. Learners reskill and upskill themselves to match with what the workplace needed. To this statement, it reflects directly on the concept of Life-Long Learning and would prepare the workforce to the industry in a best possible way.

To support lifelong learning, new mechanisms and systems have been proposed. These include a one-stop service platform for education, skills and career development, skill gap analysis offering, career guidance and job recruitment, non-degree programs for reskilling and upskilling the workforce available in both classroom and online formats, and a credit bank system encouraging people to earn experiences both inside and outside of formal education.

Thai MOOC, a national platform for providing massive open online courses, developed as part of the Thailand Cyber University (TCU) project, under the Ministry of Higher Education Science Research and Innovation (MHESI) of Thailand. Thai MOOC aims to expand opportunities for Thai people to study quality online courses for free from anywhere. Thai MOOC has played an important role to address the NXPO's strategic direction in the post-COVID-19 new normal online education in the following 5 areas :

① As platform provider & Cooperator

Thai MOOC has partnered with hundreds of universities, institutions, public organizations, as well as industrial-led companies, to develop expert-led online education courses. Additionally, it collaborates with other countries to bring popular courses from overseas MOOCs to Thai students. The owner of the course will award degrees to learners who complete it according to the Thai MOOC criteria. All partners can access the shared e-Courseware, which enables universities and educational institutions that lack experts in certain fields to provide standardized online courses. Additionally, it is a platform for online education that is prepared to serve a variety of systems comprehensively, including: Identity Provider, MOOC Course Directory, Learning Management, e-Testing, and Credit Bank. The following picture shows the integration of the major components of the Thai MOOC platform.
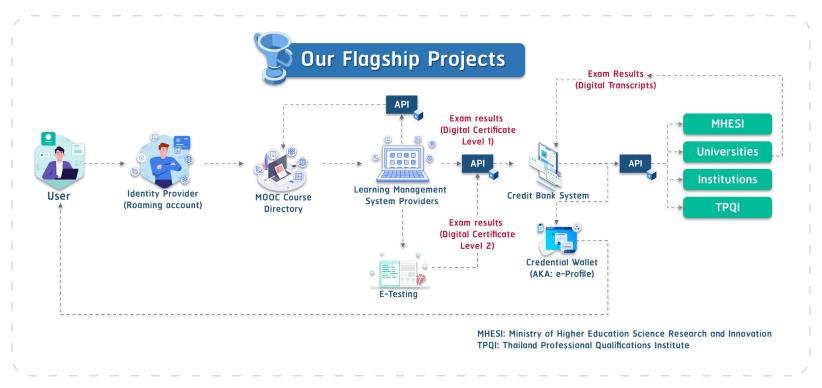

Figure 3: Thai MOOC Flagship projects

② ▶ As Online courses provider

Thai MOOC is a contemporary open online courses source of education available to the mass while offering a diverse range of courses. Online courses can be accessed on the website https://thaimooc.org. It is completely free and unconditionally open for all. At the moment, the Thai MOOC system offers courses in a variety of more than 500 subjects grouped into 12 categories.

Figure 4: Classification of Thai MOOC courses into 12 categories

Thai MOOCs have gained popularity among a range of educational institutions as a component of new normal online education, whether through Blended Learning or Flipped Classrooms, or as a supplement to existing knowledge. This is because Thai MOOC lessons can save time by eliminating the time spent in preparation and attendance at a physical classroom. Students can come to study to review content, prepare for tests, and obtain extra knowledge. This is a resource that is beneficial to both teachers and students. It is also convenient to learn anywhere and at any time.

Figure 5: Video contents on Thai MOOC with downloadable Thai subtitle via Thai MOOC's lesson window

3 ► As a Sandbox for innovating new teaching approaches as well as conducting educational research

Thai MOOC is a sandbox resource for teachers to find new ideas that they can develop further. It also effectively improves teacher skills and teaching materials. Thai MOOC can also be used as a source of research funding (R2R - Routine to Research), which can concurrently develop with online education.

4 ► As a Credit Bank

when students complete all course requirements, they will obtain an e-Certificate that can be used to transfer credits to higher education institutions or to certify working skills and professional qualifications.

5 ► As lifelong-learning community

those interested in learning, both formal and informal learners, are welcome to study, upskill-reskill, or enhance their existing knowledge. Thai MOOC now has more than 1 million students enrolled.

Thai MOOC has always and strongly considered education as more than just a piece of a degree. This believe has inspired Thai MOOC for it's main commitment, which is bringing quality life-long learning to all. It is this commitment to education that motivated the establishment of the University to Tambon (U2T) project within the Thai MOOC platform, which extends learning to the individual and community levels. Numerous activities are conducted in partnership with local residents. More quality courses will be offered in the future to adequately serve the local community's needs. (Noted : Tambon is a Thai word that means sub-district in English language).

Apart from serving the NXPO's strategic in the 5 areas as mentioned earlier, Thai MOOC will contribute to the growth of quality online education by making the education more accessible. It can be used in a variety of ways to enrich, exchange, and develop courses. Thai MOOC is crucial in pushing Thailand's educational system towards lifelong learning and expanding new normal online education and beyond. Thus, Thai MOOC is available for empowering future life-long learning for the new normal online education and beyond.

🌐 Implications

Thai MOOC has been an integral tool serving the strategic direction in the post-COVID-19 new normal online education of the Office of National Higher Education Science Research and Innovation Policy Council (NXPO) in the following 5 areas :

1) Thai MOOC as platform provider & Cooperator
2) Thai MOOC as an Online courses provider
3) Thai MOOC as a Sandbox for innovating new teaching approaches as well as conducting educational research
4) Thai MOOC as a Credit Bank
5) Thai MOOC as lifelong-learning community

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