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Dang, Ly; Watts, Sean; Nguyen, Trung

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## MASSIVE OPEN ONLINE COURSE: INTERNATIONAL EXPERIENCES AND IMPLICATIONS IN VIETNAM

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Ly Dang	Open University of Ho Chi Minh City, Ho Chi Minh City, Vietnam	<a href="mailto:ly.dang@oude.edu.vn">ly.dang@oude.edu.vn</a>
Sean Watts*	RMIT University, Ho Chi Minh City, Vietnam	<a href="mailto:Sean.Watts@rmit.edu.vn">Sean.Watts@rmit.edu.vn</a>
Trung Quang Nguyen	RMIT University, Ho Chi Minh City, Vietnam	<a href="mailto:trung.nguyen@rmit.edu.vn">trung.nguyen@rmit.edu.vn</a>

\*Corresponding author

### ABSTRACT

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Aim/Purpose	This research critically reviews literature examining the prior empirical and case study research studies to help educators and to shape the conceptual framework of what and how to prepare for MOOCS (Massive Open Online Courses), especially in Vietnam, SouthEast Asia, and developing countries.
Background	MOOCs are a disruptive trend in education. Several initiatives have emerged recently to support MOOCS, and many educational institutions started offering courses as MOOCS. Designing a MOOC is not an easy task. Educators need to face not only pedagogical issues, but logistical, technological, and financial issues, as well as how these issues relate and constrain each other. The 'MOOC' phenomenon is only just beginning to register with many educational policy makers in Vietnam. Currently, little guidance is available for educators to address the design of MOOCs from scratch keeping a balance between all these issues.
Methodology	This study is a qualitative, case study and participant observation research with critical analysis of literature on MOOCs toward implementation of online learning in Vietnam. It began as a broad search for research on online teaching and the authors went into participant observation in courses in Vietnam and elsewhere.
Contribution	Until now, designing a MOOC has not yet fully considered applications in non-native English speaking countries, such as Vietnam. This study gives guidance for educators to address the design of MOOCs from scratch keeping a balance between identified issues to shape the conceptual framework of what and how to prepare for MOOCS. Main MOOC development foci should be teachers and learners' attitudes, as well as infrastructure toward teaching and learning in cyberspace specifically in Vietnam and SouthEast Asia.

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Keywords MOOCS, eLearning, online education, constrain of MOOCs, MOOCS framework, Vietnam Higher Education

## INTRODUCTION

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Massive Open Online Courses (MOOCs) have recently received a great deal of attention from the media, entrepreneurial vendors, education professionals, and technologically literate sections of the public. The attraction of MOOCs is because they provide access to free, cutting edge courses that could drive down the cost of university level education and potentially disrupt the existing models of higher education (HE). This has encouraged elite universities to put their courses online by setting up open learning platforms, such as edX, Coursera, Alison, Udacity, and many others. New commercial start-ups such as Coursera and Udacity have also been launched in collaboration with prestigious universities, offering online courses for free or charging a small fee for certification that is not normally part of credit for awards.

Consequently, more and more institutions are joining the MOOC movement (e.g., Coursera currently counts with more than 150 institutions, while edX has more than 107 members partnering), and more and more educators are starting to offer MOOC Courses. This increasing interest in MOOCS opens up opportunities for exploring new online pedagogies and business models in education (Kowlich, 2013).

From open access to open educational resources and, more recently, to open online courses, there is growing momentum among Vietnamese HE institutions to participate in this “open” movement. The rapid expansion of MOOCs has sparked commercial interest from some big Vietnamese Universities who want to enter the HE market using a MOOC approach. Most significantly, it has opened up strategic discussions about the disruptive potential of MOOCs in Vietnamese HE and forced established providers to revisit online learning and open education as strategic choices for the future. However, designing and running a MOOC from scratch involves several issues covering logistical, technological, and pedagogical areas that educators must face (McAuley, Stewart, Siemens, & Cormier, 2010).

- Regarding issues of logistical nature, educators need to be aware that designing and running a MOOC can be a very time consuming task, and so not only educators, but also educational policymakers, need to understand the nature of MOOC and plan carefully the feasibility of the course depending, for instance, on the available human resources. The survey by Kowlich in 2013 concludes that most educators are not able to keep a balance when running a MOOC, diverting time from their normal duties like research or traditional teaching.
- In terms of technological issues, educators should be clear about the supporting systems, they will use to run MOOCs. As an example, institutions that signed an agreement with initiatives like Coursera and edX encourage their staff to embed learning contents in the platforms hosted by these companies. Therefore, these educators should be very aware of the affordances provided by the supporting platforms at the time of designing MOOCS, since those may determine, for instance, the format of learning contents or the types of assessment activities that can be supported. Moreover, according to our research about instructors' e-readiness towards online teaching, 78% of participants who are instructors in Ho Chi Minh City Open University in Vietnam (HCMCOU) said that technological competency is the biggest barrier with e-learning (Phan & Dang, 2016).
- With respect to pedagogical issues, educators need to change their mindset from face-to-face and online courses (Hill, 2012), since in MOOCs they teach to a massive number of learners from different regions, with different backgrounds, status, and motivations. Moreover, due to time constraints, educators cannot play a central role in MOOCS, and so, didactics that promote learner autonomy (Downes, 2010) and allow building connections among learners (Kop, Fournier, & Mak, 2011) should be explored.

In order to raise awareness of MOOCS and their implication for HE, this paper synthesizes the latest thinking and ongoing debates on MOOCs from the media, including blog and press releases, and from material published by individuals and organizations. This critical review intends to help educators and decision makers in HE Institutions gain a better understanding of the phenomenon of MOOCS and their potential as disruptive innovation as a part of the trend towards greater openness in Vietnamese HE. Moreover, in this paper, we present a conceptual framework to help Vietnamese HE Institutions make informed decisions about how to serve their specific mission and how to respond to the different needs of learners in a rapid changing educational market. The speed of development opens up the risk that decisions will be made in a fragmented way by different unconnected groups without a deep understanding or clear analysis of MOOCS and other potential educational education delivery models. Institutions will need to develop a cohesive strategy to respond to the opportunities and threats posed by MOOCs and other forms of openness in HE.

## RESEARCH BACKGROUND AND LITERATURE REVIEW

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We are exposing the total engagement of internet in our life, in our work, and almost everywhere. We can use Google for searching, Wikipedia for finding necessary knowledge, Facebook or Twitter and other tools for social connection, Flickr for sharing photos, and YouTube for sharing videos. These are only very few among numerous applications of technology that we are using every day. Technology is transforming totally almost all social and economic fields, especially finance and banking, engineering and manufacturing, medicine and science applying. The most out of date, in term of using technology, perhaps is education that still has been being in the framed model of teacher - learner and classroom model of teaching and learning.

In Vietnam, the main limitations of Vietnamese Education are noted by connectivists according to a study by Nguyen (2014):

- ✓ Content based and expert based content: the current education is mainly focused on transferring knowledge to learners based on fixed content and programs prepared only by experts such as teachers, professors, educators;
- ✓ Lack of non-human learning: learning process does not allow non-human actor like technology, and this is limiting the ability of using technology in the depth of learning process
- ✓ Enclosed structures and spaces of learning process: almost all learning activities happen within such boundaries like classroom or homework;
- ✓ Content based learning rather than contextual

Education reformation in Vietnam is defined as crucial strategy for national development; that is why a “new, fundamental and comprehensive” education reform has been proposed by government (ICT Center for education MOET Vietnam, 2015). The reform is addressing a total and fundamental change of the existing education system that still is highly affected by legacy and academic educational approach. This reform has to face the critical barriers from a culture and mechanism wall.

Not only in Vietnam, but all over the world, there is a lack of understanding of MOOCs’ capability of key participants (operator, lecturer, and learner). The rapid growth of MOOCs, which are offered by the best universities in the world through varied initiatives (such as Coursera, Udemy, edX, MITx, Udacity, and OpenupEd) stimulate reactions of enthusiasm, and concern as well (Abhijit & Duflo, 2014; Krause & Lowe, 2014; CEITS, 2013). On one hand, spirits of innovation, new pedagogies and greater accessibility to education can be found (Kop et al., 2011; Milligan, Littlejohn, & Margaryan, 2013). On the other hand, criticism and objections are increasing along with evaluation studies and position papers whose attitudes towards MOOCs are suspicious or resistant (Samuels, 2014). To some extent, this situation balances the enthusiasm that has gripped the public.

Moreover, a study conducted by Le, Sriratanaviriyahul, Nkhoma and Vo (2014) revealed that the course management system is in principle based on the traditional methods. The existing online learning environment (Moodle system) is still in trial phase and facing a number of challenges in rep-

licating to other education and training programs in the University, particularly for distance education programs. The existing Moodle system limits its applications in full-time and formal education while a much larger number of distance learners are still using the traditional course management system. The rapid growing of ICT infrastructure and Internet in Vietnam in the past decade has generated a great opportunity for ICT-based learning/ instructing methods (ICT center for education MOET Vietnam, 2015); however, the ICT potentials are still far away or even out of the reach of the incumbent distance learners.

According to the study “Education in Vietnam” of World Bank in 2015, supporting system for teaching/learning process in Vietnam is underdeveloped (World Bank, 2015). There is a serious lack of supporting documents such as guidebooks, instructions and guidelines for technical and teaching/learning process. Professional development and training workshops for key participants in the blended learning methods are still immature.

The study provides an excellent opportunity to be better understanding about MOOCs by conducting case studies of the most popular global MOOCs; moreover, this critical literature review also provides a conceptual framework for developing successful MOOCs for Vietnam. Deeper insights into the perspective of educators, administrators, and students regarding the adoption and implementation of MOOCs is important as it will provide an answer to the question as to whether their adoption are consistent with the objectives that educators and administrators have for the delivery of education or whether a collective response to the phenomenon might be best given a finding of a common view among fellow faculty. The study would also provide faculty with a means of gauging how their own perspective matches up to the collective so as to determine whether a change in their approach might enhance their quest to provide better outcomes for their students and understanding how they can learn from contemporary views about best practices in this space.

Developments in technology have provided access to online learning material to a greater number of people. Massive Open Online Courses (MOOCs) have been a central topic of discussion over the past few years (Daniel, 2012), specifically with regards to their impact on Higher Education in some developing countries. MOOCs are units aimed at large scale participation, where participants are dispersed, and access to these courses is open via the web (Daniel, 2012). According to Singh, O’Donoghue, and Worton (2005, p. 22) such a “diversity of the new student population requires that institutions carefully develop programmes that will satisfy a broad range of learning requirements”. Our paper is that the issues go beyond catering to diverse learning requirements and should also expand to creating online spaces that cater for culturally diverse learners. The key characteristic that emerged from the review of the literature was that the analysis of the uptake of MOOC exposes two broad perspectives, one that characterizes the conceptual evolution of MOOC and another that describes their pedagogical implications in Vietnam.

### ***MAKING SENSE OF MOOCs***

A MOOC is an online course with the option of free and open registration, a publicly shared curriculum, often with open ended outcomes (Hollands and Tirthali, 2014). MOOCs integrate social networking, accessible online resources, and are facilitated by leading practitioners in the field of study. Most significantly, MOOCs build on the engagement of learners who self-organize their participation according to learning goals, prior knowledge and skills, and common interests. The term came into being in 2008, though versions of very large open online courses were in existence before that time (McAuley et al., 2010). Some MOOCs have had upwards of 2000 registrants. MOOCs share in some of the conventions of an ordinary course, such as a predefined timeline and weekly topics for consideration, but generally have no fees, no prerequisites other than Internet access and interest, no predefined expectations for participation, and no formal accreditation. Holland and Tirthali (2014, p. 2) make it clearer for each letter in MOOC.

- ✓ **Massive:** In terms of actual number of course participants, the capacity for courses to enroll large numbers, or the capacity to obtain vast quantities of participant activity and performance data.
- ✓ **Open:** The word “open” with respect to a MOOC was the possibility for anyone with an adequate Internet connection to participate in the course.
- ✓ **Online:** MOOCs should be available via the Internet on a variety of devices to facilitate scale and to expand access beyond the traditional campus.
- ✓ **Course:** MOOCs should provide a coherent set of resources and follow a sequence of activities organized by an instructor in order to address specific learning objectives or goals. MOOCs are suggested to be bounded by time with a beginning and an end point (Holland & Tirthali, 2014).

Along with the development of technology and teaching requirements, MOOCs developed into 3 types: cMOOC, xMOOC and vMOOC.

- **vMOOC (Vocational trainer)** is a specialized type of online distance learning of some industries which require simulation and high practical skills (e.g., agriculture).
- **cMOOC (Connectivism MOOC)** emphasize connected, collaborative learning and the courses are built around a group of like-minded ‘individuals’ who are relatively free from institutional constraints. cMOOCs provide a platform to explore new pedagogies beyond traditional classroom settings and, as such, tend to exist on the radical fringe of HE.
- **xMOOC (traditional trainers)** is essentially an extension of the pedagogical models practised within the institutions themselves, which is arguably dominated by the “drill and grill” instructional methods with video presentations, short quizzes and testing.

## METHODOLOGY

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This study is a qualitative, case study and participant observation research with critical analysis of literature on MOOCs toward implementation of online learning in Vietnam. It began as a broad search for research on online teaching and the authors went into participant observation in courses not only in Vietnam, but also in Cambodia, Canada, China, France, India, Italy, Kenya, Korea, Nepal, Singapore, Taiwan, Thailand, and USA. The participant observation follows guidelines from Becker (1958), Spradley (1980), Tedlock (1991), and Yin (2011); while the case study follows Klein and Myers’ (1999) ‘Set of Principles for Conducting and Evaluating Interpretive Field Studies’. After the identification of key articles and related frameworks, the search was narrowed down to the topics of online learning, preparing for MOOCs, and international experiences of MOOCs. The transformation of the search topic into the search language was an ongoing effort to find the key terms in the field in order to locate the desired literature. The articles included in this review comprise both qualitative and quantitative studies. They were located through a search of online databases, including EBSCO, JSTOR, Educational Resources Information Center (ERIC), Academic Search Elite, and Google Scholar; the tables of contents of key journals, such as *British Journal of Educational Technology*, *Journal of Distance Education*, *Distance Education*, *Journal of Asynchronous Learning Networks*, *The Internet and Higher Education*, *Computers and Education*, *Teachers College Record*, *The Journal of Open and Distance Learning*, *Quarterly Review of Distance Education* and the *American Journal of Distance Education*; and bibliographies of relevant articles. To locate the review studies, the *Review of Educational Research* journal was examined, focusing on the reviews of online teaching published since 2003. The Distance Education Hub was also used to locate research on online teaching. DEHub serves as an online database of research on distance education and contains research articles and other resources on distance education drawn from the Australian Education Index and a variety of international organizations and publishers. In addition to searching online databases and journals, three other sources were used for the search: printed books, references of the key articles, and articles by key researchers in the field. Due to the insufficient level of consistency or agreement on the terminology used in the online teaching literature, the references of the related

publications were extensively used. Keywords included online learning, Massive Open Online Courses, online learning competencies, higher education, and distance learning.

This critical review covers articles published in the last 10 years, starting with the current research and going back to the late 1990s when research on online teaching, teacher effectiveness, and teaching with technology was gaining momentum with the dissemination of online learning in higher education institutions. Empirical research articles and articles on conceptual and theoretical frameworks were included. The review resulted in many key articles on MOOCs.

**Table 1: The main articles related to this critical literature review**

Year of Publication	Authors	Title	Main content	Perceptions of MOOCs
2015	Conole	MOOCs as disruptive technologies: strategies for enhancing the learner experience and quality of MOOCs	The impacts of growing technology. Enhancing learners' attitude toward MOOCs	Important
2014	Le et al.	Ho Chi Minh City Open University: IT Governance in Vietnamese Higher Education	The limit of Moodle System; The rapid growing of ICT infrastructure and Internet in Vietnam	Favourable
2014	Gaebel	MOOCs: Massive open online courses	Modifying the definition and role of MOOCs. MOOCs making Process	Favourable
2014	Ncube, Dube, & Ngulube	E-Learning Readiness among Academic Staff in the Department of Information Science at University of South Africa	Attitudes Technology Training	Appreciate the value of e-learning
2014	Hollands & Tirthali	Why Do Institutions Offer MOOCs?	Importance of MOOCs in HE.	Favourable
2013	Mai	The biggest challenge in teaching is emotion.	The challenges of eLearning.	Unfavourable

Year of Publication	Authors	Title	Main content	Perceptions of MOOCs
2013	Siemens	Massive open online courses: Innovation in education.	The growing of MOOCs in technology era.	Favourable
2012	Daniel	Making sense of MOOCs: Musings in a maze of myth, paradox and possibility	MOOCs' impacts on HE	Favourable
2012	Martin	Will massive open online courses change how we teach?	Instructors' attitude toward MOOCs. The effects of MOOCs on learning.	Favourable

Because there is limited research that critically analyses readiness based on online teaching, several studies from the teacher education field were included in order to frame the critique in the online teaching context. The keywords used in searching these databases and websites were MOOCs, distance education, distance learning, participation, motivators, deterrents, barriers, attitudes, and factors. This initial search yielded a total of twenties articles. After including additional keywords (satisfaction, inhibitors, asynchronous learning, online learning, perceptions, attitude, MOOCs) paired with initial keywords and searching the reference lists of those articles already found, an additional search yielded ten articles, some of which were actual research studies and others that were descriptive articles or summaries. Four dissertation abstracts were also located but results of the studies were not included in this literature review.

### KEY CASE STUDY FINDINGS

Hollands and Tirthali (2014) report that colleges and universities are adopting a wait-and-see approach, and some have considered MOOCs and have either decided against any form of official engagement or have not met with interest from faculty members to pursue them. Others have adopted several different stances toward engaging with MOOCs. Some are actively developing MOOCs and may be termed “producers,” some are using MOOCs developed by other institutions in their programs and could be termed “consumers,” and a few are doing both. There are now thousands of MOOCs available worldwide from several hundred colleges, universities, and other institutions of higher learning. Some of the platform list right below are offered by many Universities and Entities

**Alison (<https://alison.com>)** Alison has a broad range of free higher education courses from Accounting to Yoga. One special feature is their self-paced and timed classes and provision of certificates and diplomas, often for free. The site earns revenue from donations and ads placed beside videos and class materials. Learners can pay a small fee to remove ads if desired. The classes often range between four and twelve weeks, and courses usually have a video transcript. Alison enrolled nine million learners. The company is based in Ireland, but it uses contributions globally to provide quality education to everyone.

**Coursera (<https://www.coursera.org/>)** Coursera has the largest variety of courses. They also provide the freest or low-cost options, including offering financial aid. They have self-paced courses, courses on-demand, and timed classes. The classes usually range between four and twelve weeks. Most of the courses on Coursera are free, and some require a small fee to participate in certificate programs and specializations, or a sequence of classes that include a capstone project. These certificates can also be shared on LinkedIn. Students can also apply for financial aid in Coursera. One of Coursera's unique offerings is the peer assessments. Studies have shown that learning is highest from peer review and add nuance to computer-scored tests. Students can expect short lectures and interactive quizzes, allowing you time to engage with instructors and peers.

**edX (<https://www.edX.org/>)** EdX has a broad range of higher education courses with many falling in the sciences. One crucial feature is their self-paced and timed classes. Meaning, if students are busy all the time, they can go through these courses at their pace. The classes usually range between four and twelve weeks, and each course has its video transcript. EdX uses cool tools like videos and gamified labs and other things like 3D virtual molecule builder. The platform is open source, which enables developers to build and share assessment modules. EdX currently enrolls several million students. The company is a nonprofit, but it uses the contribution to provide quality education to everyone. The funds go to the class creation and improving EdX.

**Khan Academy (<https://www.khanacademy.org/>)** is sort of a YouTube for intelligent video. Rather than a sit down class, it's set up like student might expect a book to be. Student decide what they want to learn (let's say Algebra for example). At Khan Academy, student browse through the math videos, decide where they need to start and start watching. They have something like 3600 videos across a range of topics but within a year or two they will cross 10,000 and keep going. Some of the higher level categories are Math, Science, Computer Science, Humanities (with a decent amount of Art History if you are into that) and some test prep (like SAT, GMAT, etc.). In addition to the seminars, there are practice tests to test students' mastery as they move along a particular line of study. If students follow the entire track of a particular category, they can win badges that let the world know they have stuck to it.

**P2Pu (<https://p2pu.org/en/>)** was launched in 2009 with funding from the Hewlett Foundation and Shuttleworth Foundation. P2PU offers some of the features of MOOCs, but is focused on a community centred approach to provide opportunities for anyone that is willing to teach and learn online. There are over 50 courses available and processes of improving quality of courses rely on community-review, feedback and revision. There are no fees or credits, but P2PU's school of Warcraft adopted a badge reward system to integrate elements of gamification into learning process.

**UDACITY (<https://www.udacity.com/>)** is another for-profit start-up founded by Sebastian Thrun, David Stavens and Mike Sokolsky with \$21.1 million investment from venture capitalist firms, including Charles River Ventures and Andreessen Horowitz. Udacity currently offers 18 online courses in computer science, mathematics, general sciences, programming and entrepreneurship. Udacity has a vast range of classes, especially in programming and computer science. But compared to other platforms it has fewer courses. Their paid programs include coaching, feedback, and verified certificates. Udacity partners with universities to create courses that are credited and also has programs called nano degrees. These nano degree courses are made toward the employment needs of their corporate partners like Google, Facebook, AT&T, and others. When students complete a course, they receive a certificate of completion indicating their level of achievement, signed by the instructors, at no cost. Some universities began offering transfer credit for Udacity students who then take the final examination at a Pearson centre.

**Udemy (<https://www.udemy.com/>)** founded in 2010, with a total \$16 million investment from Insight Venture Partners, Lightbank, MHS Capital, 500 start-ups and other investors provides a learning platform, which allows anyone to teach and participate in online video classes. Udemy currently offers over 5,000 courses, 1,500 of which require payment, with the average price for classes falling

between \$20 and \$200. UdeMy is a fantastic place to take courses and learn new skills. With UdeMy, anyone can create a course. People do not have to be an expert to publish a course. Therefore, they have to be choosy in which course they enroll in. The good thing is student can quickly determine which courses are good and which are best left untaken. Use the course ratings to student advantage — if it has five stars, then it is probably an excellent course. If there are a lot of students enrolled in one particular course, it's been successful in the past.

Whereas edX offer only Harvard and MIT's courses, Coursera focuses on providing a platform that any university can use and Udacity only offers its own curriculum with specialised areas. Other open education initiatives, such as UdeMy, P2PU and Khan Academy have been around for a while and provide anyone opportunities to learn with experts, peers and others outside traditional universities.

With the popularity of MOOCs, universities and colleges will need to rethink how to make their curriculum delivery models and courses truly flexible and accessible. Many HEI have sought to make learning more flexible with course modular design and bankable credits to encourage learners to study at a time and pace that suits their own needs. Open courses based on new structures, ways or working and use of technology can make higher education more cost effective and accessible and may also contribute to balancing work, family and social life. Learners have access to a variety of non-traditional learning models including access to courses and materials to self-direct their own learning beyond their classes and institutions. More flexible models and open approaches will encourage more mature students to participate in higher education and gain qualifications to further their careers.

## **WHAT ARE THE DRIVERS FOR DEVELOPING A MOOC?**

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The next phase of the study explored why people are so interested in MOOCs and what are some of the key drivers behind MOOC popularity.

### ***COST***

Some, such as Christensen, Steinmetz, Alcorn, Bennett, Woods, & Emanuel (2015), argue that the one of the reasons for the escalating costs in tertiary education is the inefficient business model of tertiary provision. He noted that universities typically bundle a range of services that include teaching, assessment, accreditation, and student facilities as a package to all learners, whether they require them or not. MOOCs are opening up a discussion around the unbundling of such services, and they are exploring whether universities can offer education, or elements of tertiary education, at a lower cost.

### ***TECHNOLOGY DRIVEN INNOVATION***

According to the report of the University of Glasgow in 2015 (Kerr, Houston, Marks, Richford, 2015) about building and executing MOOCs, technology and, in particular, the internet has 'transformed' how other sectors design and deliver their services and now the question is can higher education achieve similar results. People use language such as 'technology-enhanced learning' to describe the potential impact technology can have in education, as it is seen that it can enable learners to access quality learning in new ways.

### ***LABOUR MARKET NEEDS***

There is evidence of growing youth employment globally (Mourshed, Farrell, & Barton, 2012) and some believe that HE institutions are not preparing young people for current job vacancies (Weise & Christensen, 2014). MOOCs are viewed as a medium to provide 'relevant' job training courses to all citizens over the internet.

### ***LEARNER DEMAND***

According to the report “The shape of things to come: Higher education global trends and emerging opportunities to 2020” of the British Council (2012), it found that total global tertiary enrolments are forecast to grow by 21 million between 2011 and 2020 or 1.4 per cent per year on average. MOOCs may be able to facilitate the growing numbers of people who want access to higher education. It appears that the growth in the number of learners signing up for “wholly online learning” is an indication that there is a real demand for such courses. It seems as if more and more people want to learn in their own time and the internet is allowing them the opportunity to access learning opportunities online that previously were beyond their reach.

### ***POTENTIAL VALUES FOR THE INSTITUTION***

The literature also shows that institutions see values in joining a MOOC network, such as Future-Learn or edX, and some of the main reasons for such decisions are as follows:

#### **Branding**

Institutions who typically join a MOOC network often view it as an opportunity to enhance their brand recognition and a way to join an exclusive professional network. Currently, many of the MOOC platforms, such as edX or Coursera, are viewed as exclusive clubs that have a set of entry criteria that not all institutions can meet. Those institutions that do meet the entry criteria believe their participation will benefit their institution both in terms of raising brand profile in becoming members of a professional network (Cohen, 2015). Furthermore, there are opportunities for institutions to showcase their expertise in particular fields and to publicise some of their outstanding academic talent with a view to recruiting additional students at some point in the future.

#### **Shared Services**

The development of MOOCs offers institutions the possibility of unbundling four key elements of a typical higher education programme to their students and this can mean that students’ enrolment costs are lowered (UK Universities, 2013). These elements are Content, Delivery Platform, Feedback, and Support Awards. There is interest among institutions as to how this unbundling might occur and if it can reduce costs, increase collaboration, and ultimately enhance the quality of student learning.

#### **Collaboration**

The provision of a shared online infrastructure that is managed and maintained by reputable institutions has the potential to make it easier for institutions to create and manage collaborative delivery arrangements. For example, NPTEL (the National Program for Technology Enhanced Learning), India’s national online learning platform, works with a population over a billion and allows Indian institutions to come together and offer courses or technical modules that are currently in Indian Institute of Technology and Indian Institute of Management campuses (Krishnan, 2009). Such an approach could “allow divisions of labour whereby institutions could contribute their teaching expertise, others their technical and so on” (Tertiary Education Commission, 2014, p. 26).

#### **Explore Online Pedagogies**

There is evidence that a significant number of HE institutions see MOOCs as providing an opportunity to experiment with innovative pedagogical approaches online (Allen & Seaman, 2014, 2015; Hollands & Tirthali, 2014). Accordingly, 49.8% and 44.0% of academic leaders viewed MOOCs as an opportunity to innovate pedagogy. However, in their most recent report (Allen & Seaman, 2015) this number dropped to 27.9%. Though this number appears to be decreasing, a large number of HE institutions see the MOOC space as an opportunity to conduct research around new and innovative online pedagogies.

## DISCUSSION

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### *WHY TO IMPLEMENT IN VIETNAM*

It is especially true of initiatives at the higher level in some developing countries, especially the case of Vietnam, that efforts to adapt the MOOC approach to the higher education setting are very much in infancy. Thus, systematic assessments of what works with regard to MOOCs in higher education in some developing countries, like the case of Vietnam, are not yet available. Moreover, in Vietnam, many E-Learning Modules were created, and more e-learning course have been created for free in order to develop Vietnamese education as innovative as other parts of the world.

According to the interview between vnExpress and Giap Van Duong – the first creator of MOOCs in Vietnam – GiapSchool, the first advantage that Vietnam has is a young population distribution (Hoang, 2014). Specifically, an estimated 34.5 million of 91 million people are aged 15 to 35. This is the age of people preparing for new entrants in the labor market (International Labour Organization, 2015). Therefore, the demand for quality, cheap, and flexible education is very high in preparation for this important stage.

By the end of 2016, there were about 49.1 million internet users in Vietnam, accounting for 52% of the population. Vietnam has been the best performer in East Asia with an increase of 23,951% for the 2000-2016 period (Internet World Stats, 2016). A recent comprehensive survey by Cimigo (2016) reveals that 72% of the urban population and 20% of the rural population of Vietnam have used Internet frequently. In addition, 69% and 28% of Vietnam citizens aged 15 years or more have used a mobile phone and smartphone, respectively. The globally low, average income - GDP per capita in Vietnam - makes the free characteristic of MOOCs become more attractive. If MOOCs become better known, they will clearly be worth considering by more of society, especially as people start to join or redirect their career.

In addition, the weaknesses and shortcomings as well as the rigidity of the traditional education system, especially university or higher education, makes the existence of MOOCs as an opportunity for higher education in Vietnam to have a fresh and promising start.

The differences in language of non-native-English speakers and existing English focused MOOCs prevent MOOCs from being adopted as rapidly as if MOOCs were in the local language. Local language educational materials directly compete with other MOOCs throughout the world, which are mostly using the more common languages, such as English or French. Currently, there are no public courses of MOOCs worldwide displaying content in Vietnamese. This fact helps MOOCs in Vietnam have the opportunity to develop to serve the local market, before expanding further.

Andrés Chiappe-Laverd wrote in his “Design, Motivation and Performance in a Cooperative MOOC Course” paper in 2015 that 72% of the papers studied make allusion to MOOCs as a disruptive concept from a pedagogical perspective, especially in developing countries. Due to the special massive and open nature of MOOCs there is a consistent call to propose a different theoretical scenario to that used to currently support online education or blended learning. As a result, connectivism and peer learning, openness and the relationship between MOOCs and content reuse have emerged as topics for additional attention from the theoretical perspective.

Otherwise, observing Vietnamese education, although the initial foundation of MOOCs is closely related to their connectivist principles, their massiveness necessitated the adoption of peer learning principles because of the implicit difficulties of generating customized facilitation and feedback from teachers within a massive group of students. From this perspective, students play a dual role of learner and teacher within the small workgroup style interactions that may explicitly be structured within the cohort or may arise spontaneously. This perspective suggests that the role of educator is not the exclusive property of the teacher and can therefore move to other people, even to the stu-

dents themselves, which is clearly a manifestation of its educational foundation located in peer-learning and connectivism (Conole, 2015; Siemens, 2013).

Literature shows that the attributes of openness that were explicit and fundamental to the original conceptualization virtually disappear in the recent literature except where it is explicitly mentioned that they are not being taken into account (Gil-Jaurena, 2013; Knox, 2013; Rodriguez, 2013).

However, in Vietnam, open attributes are still presented as factors with strong potential to cause change in teaching practices. Moreover, one of the most important elements behind the idea of “Openness” is “Adaptation” (Hilton, Wiley, Stein, & Johnson, 2010). This aspect, taking into account elements such as remixing, collaboration and open access, will inevitably impact on pedagogical practices such as teaching, assessment, or feedback.

Another topic that consistently appeared in the literature about MOOCs is Open Educational Resources (OER). It seems from the way these resources are related with MOOCs that they are identified as a factor that ensures openness in these learning experiences. The use of OER is associated with adaptation as the main attribute of openness. Since the content can be modified by the student (adaptation of OER), the relationship between them and the content begins to change (Daradoumis, Bassi, Xhafa & Caballé, 2013).

However, Vietnamese education has not been familiar with the phenomenon “Open”. As the traditional education system, we mainly focus on studying individually in a classroom setting. We lack the interaction between teacher-students, and students-students. However, recently, the appearances of some E-learning Module such as Thuquandoannhan, Giap’s School have given a bullet point in applying technology and innovation to Vietnamese Education, which try to open a social networking and create a social benefit.

In general, the disadvantage for MOOCs in Vietnam may begin with less discipline. Out of date thinking plus the political consequences makes Vietnamese undisciplined in habits. Education in the form of MOOCs with no constraints in terms of time, finance, and no one supervising make it likely that those students do not complete their studies.

Giap Van Duong said to VnExpress that Internet usage habits of Vietnamese are also a difficult point to MOOCs. Specifically, although Vietnam has a high number of Internet users, but mostly for the passive purpose, e.g., reading online newspapers, chatting via Yahoo Messenger, Facebook, play games, etc. (Hoang, 2014). Therefore, the appeal of network services as serious as MOOCs for Vietnam Internet users is not clear.

In fact, in Vietnamese traditional education, although the teacher taught directly in classroom, the quality is very low, then obviously the public will be skeptical about the effectiveness of an online classroom where no one controls. Actually, this is a common concern about all the MOOCs. An earlier section mentioned advantages that bring a relatively isolated market to develop MOOCs in Vietnam. However, the question of “is this market large enough to operate efficiently or not”, has no clear answers.

## **IMPLEMENTATION MOOCs IN VIETNAM: CULTURE AS A BIG BARRIER**

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In 2010, the U.S. Department of Education conducted a meta-analysis of published studies comparing online learning to face-to-face courses in postsecondary contexts in developing countries as the case of Vietnam. The results of the analysis suggest that, when well-implemented, online learning is a promising alternative to traditional course formats (US Department of Education, 2010); key findings of the analysis included:

- Students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction;

- Instruction combining online and face-to-face elements had a larger advantage relative to purely face to face instruction than did purely online instruction;
- Effect sizes were larger for studies in which the online instruction was collaborative or instructor directed than in those studies where online learners worked independently;
- Effectiveness of online learning approaches is quite broad across different content and learner types;
- Online learning can be enhanced by giving learners control of their interactions with media and prompting learner reflection,

Despite the overall promise of online learning, the online medium appears to be significantly less effective among community college populations, as reviewed below. In addition, much of the evidence regarding online learning appears troubling for the MOOC movement. Many of the features of effective online instruction are absent from MOOCs. For instance, with Giap's School - Khan Academy in Vietnam - online learning seems to work best when there is extensive student-instructor interaction or when online and face-to-face components are combined to create a blended course. Given that MOOCs are, by definition, both entirely online and massive in terms of enrollment, some features of effective online learning environments will be difficult to achieve using the traditional MOOC format.

For Vietnamese universities in particular, online education holds enormous potential for helping colleges to meet one of their core institutional missions: to increase access to higher education. However, there are significant concerns in regards to other central aspects of most universities' missions, such as remedial education. J. Brown of Inside Higher Ed (2013) observes that "MOOCs with their high-powered instruction and fast-paced delivery, but devoid of real-time faculty-student interaction, appear to offer little if any promise in helping students with the greatest needs overcome their academic deficits."

Giap Van Duong told Vietnamnet the challenges of implementing MOOCs in Vietnam in 2013, that the first and foremost challenge in online education – MOOCs – is online teaching, not online learning (Mai, 2013). If Vietnamese education can pass the difficulty of teaching online, the online learning will have more chances to succeed.

So what is the particular challenge? The main challenge is to overcome, or at least partly overcome the lack of emotions in the process of teaching and learning. An interview with distance learners questioned how they think about online learning courses. 90% of those that replied stated it was connecting with emotions - How can we feel emotion and spirit through a machine? This is indeed a huge challenge for MOOCs in Vietnam and perhaps other countries that have a culture demanding collectivist relationships revolving around emotions more so than individual focused cultures. Respondents said that when listening to lectures from real teachers, they can use all the different means of expression, like saying, looking, listening, expressions, and body language. They also could stop to talk with teachers and classmates. They may smile or laugh, or even think. That is a very real life, very focused on existence, very lively and emotional.

## **RESPONSIBILITIES OF UNIVERSITIES**

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The positive response of many Vietnamese universities in such a short period of time to the emergence of Moodle and MOOCs shows that they have the capability, responsiveness, and flexibility required to embrace new developments in a rapidly changing global environment.

Rather than MOOCs making universities obsolete, universities are making MOOCs possible: most MOOCs are produced by higher education institutions and people working in them, and it appears the best are considering implications of Figure 1 below. This wise structure to follow was adapted from research of Fidalgo-Blanco, Sein- Echaluze, & Garcia-Penalvo in 2015. Figure 1 shows the model to be considered when developing MOOCs which is elaborated upon thereafter in Re-envisioning the Context of Vietnam Universities through Teacher E-readiness. This also means that

universities must assume responsibility for the quality of all their learning activities, including MOOCs.

Each institution will have to assess whether and how it wants to use MOOCs, rather than, or in addition to, other forms of e-learning. This requires the development of strategic approaches, developed in line with institutional profile and mission, and in the wider context of the changing nature of learning and teaching and the growing role of e-learning.

It will be important for universities to explore proactively the further use of e-learning, taking into account the resulting changes for staff, students, and for their governance and management approaches. They will also have to consider learners and partners outside universities being addressed through MOOCs. As in other areas of activity, this will require strategic approaches to implementation if these new developments are to impact significantly on the “regular” teaching process and course provision.

### CONCEPTUAL FRAMEWORK OF MOOCS PREPARATION

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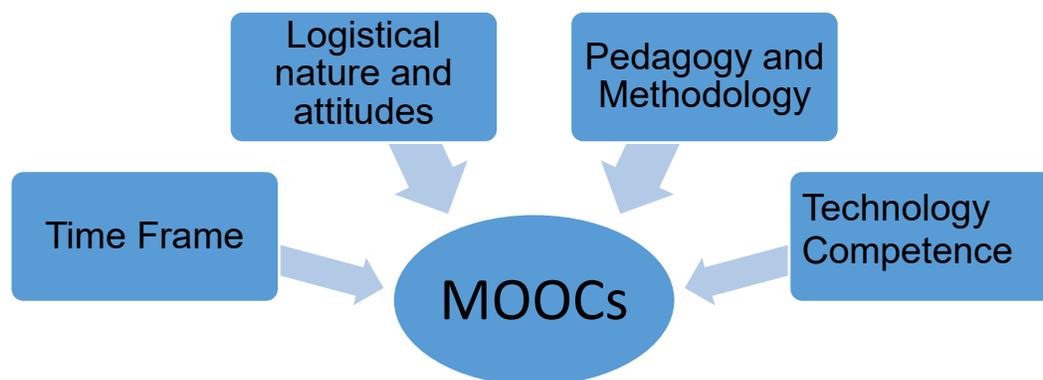


Figure 1: Conceptual Framework of MOOCs adapted from Fidalgo-Blanco, Sein-Echaluce, & García-Penalvo (2015)

#### *RE-ENVISIONING THE CONTEXT OF VIETNAM UNIVERSITIES THROUGH TEACHER E-READINESS*

As stated in the background to the study, many Vietnamese University are going to launch their online programs after several years of preparation. Universities have developed learning content and modern infrastructure; however, there has not been investment in preparing for e-learning, and MOOCs specifically. Hence, this literature review and Figure 1 help provide a general picture of what should be considered and done for the preparation of a MOOC. The newly constructed framework based on the findings of this paper is therefore a good lens for the authors to re-envision the status of universities in getting ready before starting a new teaching format, namely MOOCs.

Currently, although some Vietnam Universities such as Ho Chi Minh City Open University have used Moodle - an open source learning management system - for more than ten years, its main function was to provide forums for students to post their questions. The number of lecturers and students actually using the system was very limited because there was no learning activities or learning programs operated in the system. Thus, teaching on Moodle appears to be a new concept to most of the lecturers at Vietnam Universities. Since the administrators of the school began to prepare for online programs which will be mainly carried on a Learning Management System powered by Moodle, they predicted that there is a lot to do to prepare the lecturers to work in a new teaching delivery format. One of the most important factors to take into account is the attitudes of the lecturers who are going to teach online. The factors of Figure 1 are outlined as follows:

### **Logistical nature and attitudes**

According to Ncube et al. (2014, p. 357), “elearning can assist the university to advance its academic goals but it is important to note that these goals may be influenced by the lecturers’ attitudes toward elearning”. It was found that positive attitudes have strong impacts on the success of the adoption of elearning in higher education institutions. Reflecting on the attitudes of the lecturers of Vietnam Universities, it is subjective to affirm whether they are positive or negative about the implementation of elearning and teaching online programs because there have not been any research studies conducted on this topic at the school. Understanding lecturers’ attitudes will be useful for the school administrators to have strategic plans to support and motivate them to participate in the adoption of elearning with willingness. Within this paper, we would recommend that the school administrators should encourage more research on exploring the logistical and attitudes of lecturers before, during, and after online course delivery.

### **Pedagogy and methodology**

“Readiness in terms of instructional strategies or pedagogy has to do with the knowledge, skills, attitudes and habits of instructors to use the appropriate strategies acquired through normal face-to-face classroom interaction to accommodate the elearning ‘classroom’ and learners” (Eslaminejad, Masood & Ngah, 2010, p. 406). The term “pedagogical knowledge” refers to the ability to design appropriate learning experiences and skill at selecting instructional media and delivery methods, management of small/large group discussion, and internet interaction (Eslaminejad et al., 2010). Those learning activities must be designed for the web and available through the Internet. These could not be achieved unless the teachers form good habits with discipline.

Issues of methodology were identified as a major challenge affecting the success or otherwise of elearning. Most researchers emphasised that design, delivery, and pedagogy challenges are crucial and traditional approaches cannot be assumed to transfer to the elearning environment. As original design idea in universities is personal and essentially connected with individuals, design education focuses on strong collaboration between teacher and student as well as among peers. Therefore, in order to be like traditional classroom based activities such as lectures that have been practiced in many other disciplines, online education has to call for a wide array of instructional methods such as problem-based learning, project-based learning, inquiry-based learning, scenario-based learning, etc. The teacher’s role has to shift from that of lecturer to instructor or facilitator of the online classes and has to maximize the role of the learners. Learners need to be the center of the learning process and be able to express themselves in online learning. This educational philosophy fits into universities’ academic goals as the leaders and the curriculum designers always have the learners as the locus of their teaching and training programs. The school aims at providing the learners with practical skills and profound knowledge based on the theory of learning by doing. The process of transferring these educational goals from face-to-face to online environment requires the lecturers of the school to be well prepared with the paradigm shift. Beyond the knowledge and skills vital for online teaching, online instructors should teach with care, love and passion.

### **Technology competence**

Universities acknowledge that for the instructors to be good facilitators for online learning, they must have the technological skills and competencies of basic computer operation and technical issues relating to internet usage, such as web searching and conferencing and managing a learning management system. Therefore, there has been early efforts to computerize the administration procedures and course management system at universities. So far, there have been certain positive outcomes such as network and programs have been deployed. However, most of these systems are underdeveloped. Moreover, many teachers who do not consider themselves to be well skilled in using Information and Communication Technology (ICT) feel that technologies are not helpful in their teaching and personal work. According to Le et al. (2014), the level of ICT skills and knowledge of the key partici-

pants differed significantly in a large institution line Universities. Young scholars, having grown up with ICT, have an advantage but it could take time for the older generations to get used to the new ICT and LMS.

Apart from the advantages that the existing system brought to universities, there were many drawbacks that needed to be taken into account. Firstly, there was still insufficient understanding about eLearning and ICT among three important players: manager, lecturers, and students. This was mainly because the current course management system did not apply those in their activities. In 2016, universities have tried to change the culture by using the modern technology in daily activities. This change started by the training which include training in basic skills in using technology – Google Apps as well as training in the integration of those technologies into interactive and effective teaching. However, the training still does not have efficient result.

### Time frame

Koo (2008) supposed that time constraint could be a major impediment to affect the teachers' perceived readiness for online collaborative learning. Some teachers expressed that they were too busy with their classroom and school administrative works (Koh, 2004, as cited in Koo, 2008). This could be problematic for universities' lecturers when adopting online education. The lecturers have been used to teaching face-to-face classrooms for both mainstream and distance education. Beside a certain number of periods they are required to teach each year, the lecturers at universities are assigned other tasks such as designing and developing learning materials, doing research, and other administrative work. The workload seems to be high and might make the lecturers feel overwhelming. Hence the school leaders issued more flexible policies for the lecturers in which they are able to choose whether to do research, or designing learning materials, or designing and teaching online.

## CONCLUSION

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MOOCs promise to open up Vietnamese higher education (HE) and HE throughout SouthEast Asia and beyond by providing accessible, flexible, affordable, and fast track completion of universities courses for free or at a low cost for learners who are interested in learning. The popularity of MOOCs has attracted a great deal of attention from HE institutions and private investors around the world seeking to build their brands and to enter the education market. Vietnamese and other developing country, non-native-English speaking institutions will need to look more closely at and learn from the different initiatives outside traditional institutions that are developing new business, financial, and revenue models to meet the different needs of new groups of learners in an open HE marketplace. Open education brings new opportunities for innovation in higher education that will allow institutions and academics to explore new online learning models and innovative practices in teaching and learning. At a national and international level, new frameworks for HE funding structures, quality assurance, and accreditation to support different approaches and models for delivering higher education will be required. Policy makers will need to embrace openness and make education more affordable and accessible for all and at the same time be profitable for the institutions in an open higher education ecosystem.

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**Ly Dang** is R&D executive of eLearning Center, Ho Chi Minh City Open University, HCMC, Vietnam. She has MBA of the H-E-B School of Business and Administration in the US. Right now, she works with Learning Management Systems, Learning Content Management Systems, eLearning curriculums, and leading the instructional design team at Ho Chi Minh City Open University, Vietnam.



**Sean Watts** teaches Management and Marketing, RMIT University, Ho Chi Minh City, Vietnam. Sean started researching MOOCs, and training programs for companies and schools when he was Chair and Professor of Business and Economics, Yonsei University, EIC, South Korea. He has PhD studies, MBAs, and now 75 publications including several textbook publications and SCI peer reviewed journal articles with SCI 2-year citation impact factors up to 12.406.



**Trung Nguyen**, PhD is a Senior Lecturer and Discipline Lead in the RMIT School of Business. Trung also has a history with RMIT Vietnam, RMIT University in Melbourne, Australia, and at Ho Chi Minh City Open University where he was head of E-learning Center. He has been often invited to present at national conference on e-government. Trung is a member of Vietnam E-commerce Association (Vecom). Trung has over a decade of scholarly work, with eight publications, nine conference presentations, and a number of awards and distinctions.