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## The Impact of the COVID-19 Pandemic on Online Learning in Higher Education: A Vietnamese Case

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**Abstract:** The article mentions the impact of the Coronavirus disease (COVID-19) pandemic on online learning in Vietnamese higher education in 2020. This is a qualitative case study, by using in-depth interviews to explore the changes in the perception, methods, and orientation of online learning of students and lecturers at a key pedagogical university when experiencing the three COVID-19 outbreaks in Vietnam. The findings show that the COVID-19 pandemic has a positive impact on the developmental orientation of online learning at the Vietnamese higher education level. Even though at the time of an outbreak, opposition and dissatisfaction with online learning occurred; but through the three outbreaks, together with the efforts of lecturers and students, online learning in Vietnam has recorded remarkable achievements. This is a prerequisite for the development of online education and the innovation of digital technology in education.

**Keywords:** Case study, COVID-19, higher education, online learning, pandemic, the impact.

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### Introduction

Currently, online learning (OL) is education's best way to cope with the global challenges posed by the Coronavirus disease (COVID-19) pandemic. With the increasing number of schools forced to close and there is no time to return to normal activities. OL is the only solution that helps students can continue to hone their knowledge and skills even when there are no conditions to go to school (Adedoyin & Soykan, 2020).

The world has changed a lot since an epidemic of acute pneumonia caused by the Coronavirus began to emerge and break out uncontrollably. Immediately after World Health Organization (WHO) declared COVID-19 a global pandemic, schools, colleges, and universities closed to avoid crowds and turned entirely to online teaching and learning (Dhawan, 2020). Applying technology in education with the OL method at home is currently the only solution for all schools around the world (Nambiar, 2020).

With the closing of schools, the need for OL is higher than ever (Schneider & Council, 2020). E-learning platforms have supported the teaching and learning of millions of students worldwide (Zhu & Liu, 2020). In Vietnam, the trend of OL has only developed in recent years. Many legal documents of the Ministry of Education and Training (MoET) have promoted the development of information technology applications in teaching and learning in schools (MoET, 2017). This is the time for Vietnam to seriously think about measures to improve, develop the way to organize, and implement effective OL for the national education system, especially higher education (HE) institutions are highly susceptible to COVID-19 infection because students come from many different regions and countries.

Facing the impact of COVID-19, Vietnam has implemented OL in HE since early March 2020 and achieved many valuable achievements. This paper focuses on understanding the impact of the COVID-19 pandemic in perception, methods, and orientation for OL at a key university in Vietnam that aims to explore the impact of 3 outbreaks taking place in different socio-economic contexts in 2020.

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The following section will discuss the rise of online training courses (OTC) when the COVID-19 appeared, followed by an outline of the development of OL in Vietnam, including purposes, focus, methods used, and information of the participants.

### Literature Review

#### *COVID-19 pandemic and Online learning in higher education*

A rapidly increasing number of colleges and universities are looking for ways to deliver OTC. It can be confirmed that OL currently provides a better context for ways in which the student experience might be improved in HE (Dumford & Miller, 2018). Restauri et al. (2001) cited the importance of considering the logistical component of OL, suggestive that improperly functioning technology can hinder learning and engagement if students and instructors must devote time and resources to simple content access. However, using technology always has a downside, which makes it difficult for all countries and universities to successfully apply online learning (Pollack & Wilson, 2002). Therefore, user-friendly design and adequate technological support must be considered differently within OL.

OL has the potential to reach a wider audience; however, the unique needs and situations of students can greatly impact their educational experiences and HE institutions should take care not to exculpate existing gaps (Dumford & Miller, 2018). Close to 70% of HE institutions in the US say that OL is crucial to their long-term strategies (Allen & Seaman, 2013), and as of 2013, there were over 5.5 million students enrolled in at least one online education course at degree-granting postsecondary institutions (Snyder et al., 2016). Experiences from developed countries in OL show that it is necessary to prepare the technology platform, transmission line, and information technology capacity of teachers and learners. OL is sustainably growing in every country. However, the node of development always requires the impact of the context factor.

The outbreak of the COVID-19 pandemic has risen the trend of OL globally. Due to these effects, global governments are taking measures to ensure that education continues via emergency OTC with many deploying OL solutions (David et al., 2020; Jalli, 2020; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020a, 2020b). Most of the HE institutions in developing countries, including students and lecturers, lacking access to high-speed broadband or digital devices needed to fully participate in the OTC. Thus, the transition from direct teaching to online teaching has encountered difficulties mainly in information technology using the capacity of lecturers and students. (World Bank, 2020a, 2020b). When the COVID-19 pandemic appeared, life changed dramatically. OL also had to change to meet the educational needs of the moment. Since then, the unresolved problems related to OL in countries are gradually being overcome, again, requiring drastic and quick remedial efforts.

Owing to the risk of COVID-19, many HE institutions have authorized faculties to move their OTC to prevent the spread of COVID-19. However, it seems that, in appearance, many negative opinions and dissatisfaction with OL have increased due to the sudden change in universities, especially in terms of internet connection, personal learning devices, OL formal training or tutorials, student data accessibility, and the digital device (Agormedah et al., 2020). Given this, Hodges et al. (2020) indicated that well-designed OL experiences are meaningfully different from courses offered online in response to a crisis or disaster. This study preeminent focuses on emergency OL as a result of the COVID-19 outbreak. OL is the only and suitable option for education in the context of COVID-19. The problem for educational researches is to create learning motivation for students, as well as to innovate effective online teaching methods.

According to Taylor-Guy and Chase (2020), OTC hindered student cohesiveness, peer-to-peer and student-lecturer interaction beyond the real-time video or chat interactions. This promoted disengagement and dropout (Taylor-Guy & Chase, 2020). Saavedra (2020) reported that developed countries were at again in introducing emergency remote teaching, but then again, this was invalid for every country. It is evident that both developed and developing countries have already been grief from interludes to OL, and for many, this is not a new narrative.

Based on this evidence, HE institutions should focus on producing solutions on larger grounds about OL or OTC, in which the focus is on promoting students' learning motivation and lecturers' online teaching skills, as well as continuously innovating and developing OL support platforms.

#### *The rise of E-learning in Vietnam*

Vietnam is considered a country with great potential for E-learning development. Vietnam's E-learning market according to experts' assessment is not less than USD 2 billion and has a growth rate of 40%, but most focus on exam preparation, foreign language practice, and soft skills (Cong & Duc, 2017). Universities in Vietnam have been interested in E-learning at an early stage, although until recently the overall picture has not yet flourished through information published at two recent conferences on E-learning in education which were held at the Hanoi National Economics University and the Ho Chi Minh City University of Education in 2017. The presentations showed that there are two main groups in E-learning application in Vietnamese universities: In distance training, E-learning develops quite rapidly with programs of Topica Founder Institute, Hanoi Open University, Ho Chi Minh City Open University, etc. These are university-level training programs that attract students to study (Hanh, 2017; Tam, 2017). However, compared to

Vietnam's population as well as the size of online universities in the world, this number is still modest and focuses on certain industries. In formal training, E-learning is used in the form of support or a combination of traditional learning in class. Schools that have implemented this program such as Can Tho University, Hanoi University of Technology, Da Nang University, Thai Nguyen University of Education are mainly pilot (Linh, 2017; Tam, 2017; Thai, 2017).

#### *Online training courses in the context of COVID-19 outbreaks in Vietnam*

In 2020, the COVID-19 pandemic hit Vietnam in the first three months has created a period of crisis and transformation of the economy, society, and especially education. All Vietnamese schools have to close and switch to OL. Since it is the first time to deploy OL in a massively, with little experience and pilot nature from previous research, the implementation of OL at this time is facing a lot of difficulties such as (1) lecturers - students have difficulty in using applications, software for OL (Thuan, & Hong, 2020); (2) many problems with the internet system and transmission line (Oanh & Thuy, 2020); (3) the issue of network information security is not guaranteed (Tham et al., 2020); (4) students' learning motivation and OL skills are not high (Dung & Thuy, 2020); (5) the impact of objective factors on students' OL attitudes such as parents complaining, friends dominate, online game addiction, sleeplessness, etc. (Thanh et al., 2020). Although these are the difficulties, but also an opportunity for educators to identify and find innovative solutions, develop training methods and internal OL content best suited to Vietnam's socio-economic characteristics. This is an important milestone marking the strong transformation of OL in Vietnam, as well as the context that reveals the urgency to carry out this study to promote a change in the perception and behaviors of Vietnamese lecturers and students.

In the second outbreak, which took place from July to September 2020 in the Da Nang City outbreak and spread to the provinces concerned, Vietnam already has experience in the prevention of the first phase. The transition to OL at HE went smoothly. However, the prominent problem in OL at this stage is the teaching method. Lecturers did not create motivation for students because teaching methods were too boring and traditional (Dung & Thuy, 2020). Many students and parents reported that OL makes students' academic achievement decline compared to direct learning (Thanh et al., 2020). This is a challenge and also an opportunity for researchers and higher educators to study and implement reforms in OL methods, approach the trend of transforming smart education globally.

In the third outbreak, which took place in the last 2 months of 2020, Vietnam has experience in pandemic prevention and is recognized worldwide (Ministry of Health Portal, 2020). Therefore, the transition from training to OL has been carried out smoothly and has achieved many remarkable achievements. At this time, most lecturers and students are familiar with OTC. Lecturers have also made many improvements in online teaching methods, learning has become easier which has been learned from the second outbreak (Long & Ly, 2020). It can be affirmed that this is the period when OL has become a trend of teaching in Vietnamese education. We chose this period to explore the impacts of COVID-19 on Vietnamese OL in HE.

In general, through the 3 outbreaks of COVID-19 in Vietnam, OL has improved and developed significantly, from achievements in initial pilot studies to mass implementation. Therefore, this study is conducted to achieve the goal of exploring the change in perception, methods, and orientation of OL at a Vietnamese university. With this research orientation, we focus on deep understanding and exploring the effects of the COVID-19 pandemic, from the socio-economic context, from the transition to smart education of the Vietnamese HE system to OL. The next section will present the method used to design this study.

## **Methodology**

### *Study design and Instrument*

The purpose of this study is to explore the experience and the change in the perception, method, and orientation of OTC in the Vietnamese HE system after 3 outbreaks of COVID-19 from undergraduate students and lecturers, that aim to propose solutions to improve the global smart education-oriented of HE system. The researchers posed the question: *'How has the COVID-19 pandemic affected the perception, methods, and orientation of online training courses in the Vietnamese HE system?'*. Therefore, designing a case study research involving a qualitative approach with in-depth interviews will provide sufficient and rich data to answer this question (Baskarada, 2014).

For an in-depth analysis of the change in the perception, method, and orientation of online training courses in the Vietnamese higher education system after 3 outbreaks of COVID-19, structured in-depth interviews were used as the primary instrument. The data gathered from in-depth interviews will help researchers analyze the different experiences from participants from different social backgrounds who experience the same product (Morris, 2015). This brings an overview of the research's scope. The interview questions were organized in the following open-ending structure to find out the experience of the participants when experiencing the OTC:

- (1) The perception's questionnaires: understanding, evaluation, the experience of OL.
- (2) The method's questionnaires: interest and responsiveness to methods, techniques, and forms of OL.
- (3) The orientation's questionnaires: expectations, needs, and requirements of OTC.

Due to the impact of the pandemic, Vietnamese universities organize online teaching, so the interview is also conducted in the online Google form. The deadline to respond to the interview is 7 days from the date of submission. The researcher conducted the interview was from December 2020 to the end of January 2021.

The study was approved by the Ethics committee of the Ho Chi Minh City University of Education (under the Vietnamese MoET) and by the Declaration of Helsinki. The participants were fully informed regarding the interview prior. Participation in interviewing was considered a proxy consent to participate and approval for publication.

Interviews were conducted online using Zoom software. The researcher sent a general announcement email about the research purpose and interview timelines to all lecturers and students at the university. Then, based on the number of volunteers participating in the interview and emailed feedback to the researcher, we arrange online face-to-face interviews from 45 to 60 minutes per participant to ensure the quality and duration of an in-depth interview. The interviews were conducted in the Vietnamese language (mother tongue), then translated into English by two language experts, finally reviewed by a native reader. The interviewers were interviewed according to the existing questions until the data saturation was reached.

### *Subject selection*

The participants are from a key pedagogical university in the southern region of Vietnam. The researcher chooses a key pedagogical university because this university has training in pedagogical students and the output standard is that graduates can teach online, as well as be able to apply information technology in teaching. This is a very necessary requirement to innovate Vietnamese education, when the future teachers are capable enough to approach technology change, towards the development of smart education in Vietnam.

Out of a total of 1600 student emails sent, 1400 replied and 945 agreed to participate in the interview. Out of a total of 200 lecturer's emails sent, 200 replied and 150 agreed to participate. The interview data selected for analysis was extracted from interviews with the two above groups to serve for processing the study purposes.

### *Data analysis*

The ATLAS.Tis 9 software was used to store the participants' statements after coding and was used to extract the interview data into the Findings section. Quotes from students were coded as S, and from lecturers were coded as L. The numbers after each code were used to identified individual participants in each group. As an example, S1 is the first student's quote.

A thematic approach was used in this study (Braun & Clarke, 2006). Interviewing data collected by thematic approach were analyzed to develop a case description. Key themes and sub-themes emerged from the analysis. Important factors shared by Ss and Ls regarding the experience of the online training course were highlighted.

Because the number of interviewees is quite large, we only quote representative statements (same words, similar opinions), so the discussion between the researchers, the supervisors, and a third party expert group from the Ethics committee of the Ho Chi Minh City University of Education come to agree on these representative statements.

Through thematic analysis, key themes relating to the experience of the online training course were identified from informant responses. These themes related to *the change in perception, method, and orientation of the OTC* of the two groups of participants. The process of coding themes and sub-themes was interpreted independently by 3 experts (1 in IT, 1 in OL, and 1 in educational psychology). After that, the 3 coding results are discussed in a group and supervised by an educational expert to ensure reliability and semantic consistency. After the group discussion, the results of themes and sub-themes coding were agreed upon and presented in Table 1 (see Table 1).

Table 1. Coding interview quotes into themes and sub-themes description

Participants	Themes	Sub-themes	Interview quote's examples
Students	Recognizes the urgency to change to OL but does not have the motivation and OL method	Can't help but learning	- I do not want the interruption of schoolwork caused by COVID-19. Other economies are still active, so I can still study. Although studying online has many shortcomings, I find that reading books, self-studying documents, and asking questions with lecturers can help me ensure my knowledge.
		The low discipline during the online course	- I often overslept and quit online classes. I think when studying at home, it is not necessary to wake up early to prepare for school. So sometimes, when I wake up, I go back to sleep thinking that it is still early to learn.
		A gap in the OL method	- It is an obsession of mine. The teacher assigns too much homework while they are not online often to answer questions for me. They just assign assignments and mark them. Sometimes I don't know how to do it, my friends don't know, and we don't know whom to ask.
Lecturers	Persistent in not changing to OL though knowing that this is a national and international educational orientation	Educational perspectives do not keep up with the times and the country's context	- I wonder why I have to switch to online teaching when face-to-face teaching is so good? Can online teaching use active teaching methods? Can learners be central when it comes to teaching online? In my opinion, in the online course, the instructors are like talking in front of the camera regardless of whether anyone is listening or watching.
		Lack of motivation at work to make change	- I require a separate salary for online lessons or online courses. No salary at the same price as live classes in class. This is not commensurate with the time and effort I put into it.

### Findings

The researchers presented the themes in groups of participants to better understand participants' experiences and changes.

*Students: Recognizes the urgency to change to OL but does not have the motivation and OL method*

*Can't help but learning*

All 945 participated students said that the inability to go to school when the COVID-19 pandemic happened was terrible for them. S134 shared that:

'I am very worried because I don't know when I will return to school. I care for my friends and my lecturers.' (S134)

S25 confirmed the uncomfortable feeling when COVID-19 comes:

'Social block down and having to stay at home is very boring. All day I just make friends with laptop and smartphone. It also makes me not happy to study online.' (S25)

Due to the official transition to online learning, 765 students reported that they did not like this way of learning. They find it difficult to learn and ineffective. The quotes from S54, S178, S293, and S655 reported these problems:

'I find it very difficult to approach this new way of learning. An Internet connection and Zoom software continuously fail. I cannot learn the lesson, nor keep up with my study progress.' (S54)

'Moving to online learning, I cannot keep up with the lesson progress. Why does the school not delay the academic year until the control of the COVID-19 pandemic but switch to online learning like this?' (S178)

'The area where I live is far away from the city. Therefore, my connection to online learning is facing many difficulties.' (S293)

'I was completely passive when switching to online learning. I have never been prepared or instructed on how to study online, so it is difficult for me to keep up with the lesson progress.' (S655)

In the early stages of the COVID-19 pandemic, 597 students reported difficulty having to immediately switch to OL without prior notice or preparation. This makes it difficult for them to study online. However, 332 students shared that, although it is difficult to approach this new way of learning, it is the only option to ensure safety and health, as well as to adapt to a new learning environment in the context of the COVID-19 pandemic. S82, S490, S727, and S800 shared their opinions:

'I do not want the interruption of schoolwork caused by COVID-19. Other economies are still active, so I can still study. Although studying online has many shortcomings, I find that reading books, self-studying documents, and asking questions with lecturers can help me ensure my knowledge.' (S82)

'Online learning is the only option in the context of a pandemic. Even my lecturers have difficulty teaching online, so I have to try to adapt to this new way of learning. It is impossible to delay studying for long because doing so would be like harming yourself before the attack of COVID-19.' (S490)

'It is not difficult to learn online. The problem lies in the quality of the internet connection. I like this kind of study better than going to class. Its biggest advantage is that you can study anywhere.' (S727)

'I agree with the view of switching to online learning. I can ensure the safety and quality of my studies. Learning online is not difficult, the difficult part is overcoming personal self-delay.' (S800)

Thus, the COVID-19 pandemic has created a context for Vietnam to implement online training courses. Although there are still many difficulties, the students have partly accepted these challenges and tried to overcome them. They understand that, without OL, there is no other option to continue learning in the context of a pandemic. Learning is important, and more importantly, effort in learning.

#### *The low discipline during the online course*

When interviewed about the evaluation of the OL and OL method, 253 students reported the subjective factors from both the learners as well as the lecturers greatly affect the quality of the online course.

'I can hardly learn in a long time while studying online at home. I always feel sleepy and drowsy. Lecturers keep teaching and completing the lesson, regardless of whether students listen or not.' (S19)

S72 and S821 agreed:

'Food, drinks, video games, social networks, and especially the bed are the things that keep me from concentrating on online learning. My friends are not there to remind me like in class. I cannot control myself.' (S72)

'I often overslept and quit online classes. I think when studying at home, it is not necessary to wake up early to prepare for school. So sometimes, when I wake up, I go back to sleep thinking that it is still early to learn.' (S821)

Indeed, the issue of discipline and self-responsibility are the subjective factors that determine the quality of OTC. However, the issue of OL motivation should also be mentioned here to contribute to reinforcing students' discipline and self-responsibility, as well as to create excitement for them to participate in an OTC. S330 and S587 reported on learning motivation as follows:

'I can combine listening to music while listening to a lecturer, which makes me concentrate more when studying online. This is an opportunity for me to practice my online learning skills so that later as a teacher, I can pass this learning motivation to my students.' (S330)

'I always ask for the support of my parents in reminding me to study online. I also motivate myself with an alarm on my smartphone to not fall asleep. At the same time, in online lessons, I always ask a lot of questions to better understand the lesson.' (S587)

Faced with the shortcomings of low discipline and motivation in the OTC, it is essential to learn students' evaluation of learning as well as online teaching methods at this time.

#### *A gap in the OL method*

Interview results revealed some shortcomings in current online teaching and learning methods in Vietnam. However, this was markedly different in the 3 outbreaks of COVID-19. In the first outbreak, most of the students had difficulty connecting and learning online when it all happened unexpectedly. 3 typical quotes from 433 students recounted:

'When learning through MS Team, I have many difficulties when listening to lecturers, as well as interacting with other students. The internet lost connection continuously. Lecturers are just giving lectures and they do not seem to care if you listen or not, as long as you join the class.' (S93)

'Learning online is boring. Teachers talk a lot. Until I and my classmates share the situation, the class situation is very messy. Everyone is talking and cannot hear anything. The classroom is very disorderly.' (S189)

'It is an obsession of me. The lecturers assign too much homework while they are not online often to answer questions for me. Sometimes I don't know how to do it, my friends don't know, and we don't know whom to ask.' (S601)

Up to the second outbreak, it seems that online teaching and learning methods have not been improved, leading students to feel uninterested and unmotivated. S450 and S712 shared that:

'I am very tired of studying online. The students just listen. While around me and my friends there are too many temptations at home, affecting my attention to the lecture, making me dissatisfied and ineffective in studying.' (S450)

'I want to interact with my friends while studying online, as well as want the teacher to organize some games, or simply watch video clips and comment together like when studying live in class. I do not like to sit and listen to the lecturer or self-study the lesson like now.' (S712)

In this second outbreak, the students have needed OL in new ways. The need to innovate online teaching and learning methods, as well as OL towards positive education, has been formed. Therefore, when the third outbreak occurred, students were more satisfied with the new OL method, as well as the new OTC with increased interaction and a more learner-centered orientation. S21 and S227 shared:

'I feel more excited than before. Learning is easier. I am used to networking and logging into the classroom. Lecturers have designed many online games that incorporate lesson content on Kahoot, Quizziz. At the same time, I was also able to work in groups with online friends, then present to the class as a live presentation.' (S21)

'I gradually felt like studying online rather than learning directly. Interacting with each other to make presentations, organize games, even record video clips to share their views appears. There is no longer a gap between direct learning and online learning, I realize.' (S227)

In general, the starting point of the OL in Vietnam when the COVID-19 pandemic occurs was a lot of shortcomings in the method of online teaching and learning, but after 3 outbreaks, the gaps in online teaching and learning methods gradually improving both students' perceptions and skills. This is a valuable step in the change and development of the new generation of Vietnamese students.

*Lecturers: Persistent in not changing to OL though knowing that this is a national and international educational orientation*

*Educational perspectives do not keep up with the times and the country's context*

The data of interviewing lecturers showed that many findings are affecting the effectiveness of OL, as well as descriptions of experiences and changes in their perceptions and teaching methods. The most special is the persistence that refuses to change to online teaching, knowing that it is a common and compulsory trend in the context of the COVID-19 pandemic that strongly affects Vietnamese education. 3 in 150 lecturers evaluated the OL as follows:

'I am not interested in teaching online, it makes my lessons less interesting. I have always wanted to create a positive and vibrant classroom atmosphere. I understand that online teaching is required in the context of the COVID-19 pandemic, but I still prefer the traditional classroom.' (L15)

'There are many shortcomings in teaching online. I am not good at using laptops and social media. I have been teaching in class for over 30 years and I find I am not keeping up with the advancement of technology. Every time I use a laptop I have to rely on my son.' (L24)

'I wonder why I have to switch to online teaching when face-to-face teaching is so good? Despite the COVID-19 pandemic, can we wait until the pandemic is extinguished and back to school? Can online teaching use active teaching methods? Can learners be central when it comes to teaching online? In the online course, the instructors are like talking in front of the camera regardless of whether anyone is listening or watching.' (L56)

Although in the early stages when the COVID-19 outbreak arose, the OL met with the objections of the lecturers, some lecturers recognized the growth opportunities of the OL during this period. Two of the lecturers shared that:

'This is an opportunity to promote and experiment with mass OL. Through OL, it is possible to assess the level of satisfaction, as well as the current capacity that Vietnamese education can perform to develop according to the education trend of the 4.0 era.' (L2)

'When implementing OL, I am sure we will face many challenges and difficulties because Vietnam is a developing country, its economy is still poor, many students cannot afford to buy laptops for OL use. However, with the support of the university, as well as a sense of responsibility of the students, this will be sustainable development of Vietnamese education.' (L76)

When the second and third outbreaks broke out, lecturers, even the most persistent, gradually changed their perceptions and teaching methods to support students and develop their professional skills most effectively. L8, L92, and L121 after 3 outbreaks confirmed that:

'The COVID-19 has changed the way we live and learn. Even though I do not like online teaching, I have to accept it. Through exchanging and learning from colleagues, I have to be able to organize games and enhance interaction with students. However, I still do not accept the direction of switching to OL shortly.' (L8)

'I can teach online, however, I only accept teaching from 30 to 40% of the amount of the course. Online teaching takes a lot of my time and my health. I will need time-saving solutions facing the laptop while student learning is still effective. Personally, assigning assignments and letting students do their research, and if you have any questions, email me is an effective method.' (L92)

'Through 3 outbreaks, I have successfully researched and tested many different methods of online teaching, which bring students more excitement and motivation to join the classroom. However, the preparation of online learning materials left me no time to take care of myself and my family. This makes me very concerned.' (L121)

Although lecturers have begun to change their perceptions of OL in the context of the COVID-19 pandemic, they are still conservative and do not believe in OL or online teaching methods. This is a major obstacle when applying for OL in Vietnam, especially in higher education. From here, the researcher raises the question, why the lecturers are still conservative with their 'old' educational perception?

#### *Lack of motivation at work to make change*

To explain the question of why lecturers persistently defended their educational perceptions from the transition to OL, findings from interviews with 115 lecturers about their expectations and orientations were clearly described for this reason. It is the lack of motivation to work that hinders the dedication to work as well as OL development among lecturers in Vietnam. L27, L89, and L101 reported that:

'The university approaches the trend of educational transformation towards information technology application. But the salaries and social welfares of lecturers are still the same. It is not fair.' (L27)

'I require a separate salary for online lessons or online courses. No salary at the same price as live classes in class. This is not commensurate with the time and effort I put into it.' (L89)

'I wonder if there are any changes in the salary or benefits of the online teaching and the OL? The application of information technology in teaching is a modern trend, and teachers need financial support to meet the new educational trend.' (L101)

Thus, to successfully implement OL in HE, the issue of improving work motivation, in particular, changes in salary and social welfare policies is essential for lecturers. They are the ones directly implementing OL, they need to be motivated to change and develop educational methods in the new context of the times. This statement is clearly emphasized in an interview with L83:

'We [lecturers] are pioneers in e-learning, as well as will be the trainers of future teachers in e-learning methods. We [lecturers] know that in this time [COVID-19 pandemic], the issue of salary and welfare policy changes is sensitive and difficult, but it is something that needs to be carefully considered for us to be guaranteed in life to teach and dedicate. If this policy change occurs, I am sure that the transition to OL in HE will be more efficient, as well as respond to the new educational needs of the times.' (L83)

### **Discussion**

To learn about the changes in perception, methods, and orientation of OL at the Vietnamese HE through the impact of three COVID-19 outbreaks, we conducted in-depth interviews with lecturers and students of a key pedagogical university in the Southern region of Vietnam - which produces future teachers capable of applying information technology in teaching, and currently the participants in OL for the university. In-depth interviews with lecturers and students have contributed to shed light on a change in the perception, methods, and orientation of OL in Vietnamese HE, from the opposition, non-cooperation, and feeling when participating in OL in the early stage of an outbreak (outbreak 1) has gradually transformed into cooperation, improvement and there is a need for innovation and improvement of the OL support policies in a later stage (outbreak 3). This change in three research issues is tied to the

timing of the three outbreaks. Specific analysis and commentary on the findings will be covered in the following themes.

*The first outbreak and the change in perception of OL as a sustainable development orientation for Vietnamese higher education*

The findings have similarities in the perceptions of Vietnamese lecturers and students about OL over 3 outbreaks of COVID-19 with previous quantitative studies in Vietnam (Oanh & Thuy, 2020; Thanh et al., 2020; Thuan & Hong, 2020). In the first outbreak, Thuan and Hong (2020) described in their research the difficulties and limitations of OL by both faculty and students in accessing and using applied learning platforms in OL. The limitation of this OL approach not only occurs in Vietnam, Tang et al. (2020) when studying the efficiency and satisfaction of OL of students, reported that the OTC was ineffective and not well received in Chengdu, China. OL in Pakistan was also faced with difficulties in implementation when the COVID-19 pandemic broke out in early 2020 (Sarwar et al., 2020) - at the same time as the first outbreak in Vietnam. However, in developed countries like the US, there are not many difficulties in implementing OL because there is a solid technological foundation, as well as local students, are very familiar with this form of learning as an essential content in their college curriculum (Johnson et al., 2020). Thus, resistance and dissatisfaction with OL appear in many developing countries, with an unstable online teaching technology foundation, especially in countries that are transforming from passive teaching to active teaching with the application of information technology in teaching, including Vietnam. This finding supports the view that developing countries have more difficulty in OL.

In Vietnam, opposition and dissatisfaction are found in both the faculty and the students. Students are familiar with classroom learning and have hardly ever studied online. Although in recent years, the Vietnamese education sector has accelerated the application of information technology in teaching and innovated teaching methods towards developing learners' competencies (MoET, 2017), which focus on improving competence in applying information technology in learning for teachers and students (MoET, 2018a). But the results are not feasible and are still patchy, only a part of teachers and students can do this (MoET, 2020a). This was a huge limitation that affected the sudden transition to OL when COVID-19 appeared, causing both students and faculty to face many difficulties. However, with findings from in-depth interviews, the researcher found that the main opposition and dissatisfaction were from the lecturers. Because lecturers do not cooperate and change educational perspectives, they delay in innovating and improving OL as well as online teaching, leading to ineffectiveness in the teaching process, and unintentionally reduces students' learning motivation.

There is no denying the effect that the OL brings in the context of the COVID-19 pandemic, when schools and services of life have to be closed to ensure safety, also from this social context, which causes teachers to students gradually change their perceptions of the OL's importance. Because the impact and unforeseen development of COVID-19 is an objective factor that strongly influences the perception of the participants. They realize they cannot fail to adapt to the new demands of education. Since then, the OL has been deployed more effectively and arose inadequacies, which is also the foundation for improving E-learning in Vietnam.

*The second outbreak and the change in online teaching methods as an indispensable condition towards perfecting a student-centered approach*

Because of facing initial difficulties in the technology foundation, Vietnamese HE has learned from experience and revised to more complete the OL implementation mechanism. Specifically, in the second outbreak, lecturers and students no longer have difficulty in connecting and using OL applications (Tham et al., 2020), and there is a need for innovation in online teaching methods. This further emphasizes the difficulty in countries that are reforming from passive teaching to active teaching in both changing thinking ideas, teaching perspectives, and practicing active teaching methods. In the context of leaping from passive teaching to online active teaching, it was ignoring active teaching practice in the classroom. This is a very big difficulty for Vietnam, as the teaching staff tends to age and the number of lecturers ensuring teaching capacity with information technology application integration is very low (Dinh-Thai et al., 2020).

The findings from the interview show that both students and lecturers have difficulty in online teaching and learning methods. With students, because they cannot shape the method of OL, they have difficulty. But with lecturers, because of lack of motivation at work as well as lack of preparation in training and research on OL to not create the motivation for OL for students. The problem of lack of discipline and responsibility of students in OL is also an issue that needs to be studied further to explain and propose appropriate measures.

From the findings mentioned above, an internal problem of teaching perspective in the Vietnamese HE system, many lecturers still consider themselves as the center, not yet put themselves in the position of the learners. Although the educational perspective of the MoET is student-centered teaching (MoET, 2018b), however, when it is deployed to schools, this perspective has yet to be effective. This has influenced the thinking of teaching perspectives and teaching methods of lecturers. The delay in innovating the teaching methods, leading to OL falling back to traditional teaching - just listening for students.

However, it is the positive impact from COVID-19 that has changed the teaching perspective of Vietnamese lecturers, they are no longer too strict in teaching methods, they have researched and applied the methods themselves. New active teaching methods have been widely deployed from the previous studies into their work. Since then, achievements in OL methods have continuously appeared (MoET, 2020b), improving students' learning motivation, as well as lecturers'. The change and improvement in OL methods driven by the positive side of COVID-19 are also mentioned in some international studies of Krajewski et al. (2020). This not only helps people think more positively (Yamaguchi et al., 2020), but it is also the driving force for developing countries to change and reform outdated ideas and opinions, including promoting modern teaching perspectives – student-centered.

*The third outbreak and the change in the orientation of OL development as a sustainable, long-term strategy and attached to the overall national educational curriculum*

The third outbreak in Vietnam is an affirmation of the important position of the OL in the educational system, especially the HE. Many studies have been conducted to evaluate the effectiveness and satisfaction of OL at this time to compare with previous times, the results show a significant improvement in OL satisfaction (Dung & Thuy, 2020) as well as the fact that teachers apply many effective, invested and effective online teaching methods (Thanh et al., 2020). Thus, lecturers' capacity to apply information technology in teaching, as well as information technology competencies of students has been significantly improved through three COVID-19 outbreaks. This helps to reinforce the educational orientation for competence development that Vietnam is implementing in the national educational curriculum (MoET, 2018b). Findings from the interviews also show similar results. However, when focusing on in-depth research, the researcher discovered the causes that affect the delay of lecturers in changing educational perspectives as well as teaching methods: there is no motivation to change because the salary and social welfare policy cannot be changed.

It is the dissatisfaction and aspirations to improve salary policies of lecturers that make the implementation of OL ineffective, as well as affect the quality of OL in the Vietnamese educational system. The salary satisfaction of Vietnamese official-lecturers is assessed by Thien-Vu (2020) at a low level, even not enough for lecturers to cover their lives. This result is in line with the finding from interviews that faculty are currently dissatisfied with the current salary policy, as they have to change and invest too much in OL, but their salaries and social welfares remain the same.

Gradually, the development trend of OL in Vietnam has not been influenced much by COVID-19 and has become a sustainable development orientation in education. Vietnamese MoET (2020c) confirmed that Vietnamese education, especially HE, is changing towards smart education, with the application of information technology in education and training. The COVID-19 pandemic appears as a factor that accelerates the technological nation of education in Vietnam. When E-learning platforms and OL are completed, it is also time for Vietnam to develop smart education. Therefore, the orientation of the OL as a sustainable, long-term strategy and attached to the national educational curriculum is a key orientation and is not affected by the COVID-19 pandemic.

### **Conclusion**

Through three outbreaks of COVID-19 in Vietnam, perception, methods, and orientation of OL implementation of lecturers and students at a specific pedagogical university has changed and contributed to improving the trend of educational technology in Vietnam. Although in each different outbreak, changes are different, it is brought to Vietnam's HE opportunities and challenges in restructuring the traditional education, towards sustainable development in education according to international trends. Of course, the first moment is always limited, but if the lecturer - the one directly implementing the OL courses, and the students - the OL beneficiaries are aware of the opportunities and challenges to thrive, they will adjust to change and improve. From this study, the researcher emphasizes the importance of changing perceptions of the participants in OL, as well as E-learning in creating long-term and lasting effects for the education. In addition, it is necessary to recognize the positive side of the COVID-19 pandemic as a node of development, promoting the strong development of OL in developing countries, including Vietnam.

### **Recommendations**

To develop OL in HE in the context of the globalization of digital technology, as well as to adapt to the unforeseen developments of the COVID-19 pandemic, there are 3 issues to be concerned: (1) Universities must prepare lecturers and students before converting to OL (possibly through seminars, workshop or design manuals, etc.); (2) periodic training in online teaching and learning methods is necessary, which focuses on creating motivation and maintaining motivation and discipline in OL; (3) consideration is given to improving salary and social welfare policies for lecturers. These findings and recommendations are based on actual implementation and achievements in a developing country - Vietnam; and can be considered as a reference channel for other developing countries to gradually transition to OL in education as a mandatory requirement or situation. With future researches, the deeper analysis of learning motivation, testing new online teaching methods, as well as proposing changes in salary, learning, examining, and evaluating policy in OL are continuing research directions from this study.

### Limitations

Aside from its strengths, this study also has some limitations. Firstly, the participants all come from a key pedagogical university, unable to reflect generally the problem. Second, the interviews focused more on the change in perception than on the proposal of measures and development orientation for the OL in Vietnam. Therefore, continuing to research and perfect solutions and development orientations for OL is a topic that the research team will continue to learn in the future.

### Authorship Contribution Statement

Duc-Long Le: Conceptualization, design, data acquisition, admin, technical and material support, supervision, final approval. Thien-Vu Giang: Design, data analysis/interpretation, drafting manuscript, critical revision of manuscript, editing/reviewing. Dieu-Khuon Ho: Data acquisition, editing, data analysis, material support.

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