FROM OFFLINE TO ONLINE: ALTERATION OF TEACHING-LEARNING STRATEGIES IN COVID-19 PANDEMIC IN VIETNAM

Giao, Vucong, Vietnam National University
Khoi, Nguyenviet, Vietnam National University
Cu, Vuthanh, Vietnam National University
Dung, Vuanh, Vin University

ABSTRACT

This paper reveals the evolution in teaching and learning in Vietnam in the context of the Covid-19 pandemic. Like many countries in the world, Vietnam suffered from this global crisis in many senses. The common problem is that the unexpected impact of Covid-19 led to the ill-prepared situation in teaching-learning strategies. The authors would reveal how Vietnam adapted to this sudden change and found it quite successful despite facing vaious challenges. On this ground, the authors discuss and advocate the future of online teaching-learning in this country.

Keywords: Education, Teaching-Learning Strategy, Covid-19, Vietnam

INTRODUCTION

Since the outbreak of Covid-19 in Wuhan, the pandemic has spread globally and impacted many aspects of our daily lives (Franchi, 2020). For most people, the virus negatively affected human life in an unprecedented way (Franchi, 2020). Like other countries in the world, Vietnam applied various containment measures to cope with the pandemic, including isolation, contact tracing and quarantine, physical distancing, hygiene measures, and lockdown (Thao, Ha, Phuong & Minh, 2021). From the first outbreak in the country, the Vietnamese Government has dictated to isolate, track, and restrict people from the epidemic zone, implement medical declarations (Prime Minister, 2020) and control stricter (close) the border (Prime Minister, 2020). To be specific, Vietnam has used widely social distancing to protect themselves and others from the spread of Covid-19 (World Health Organization, 2021). That makes Vietnam controlled the epidemic well with "extreme but sensible" measures (Jones, 2020; Quach & Hoang, 2020).

Nevertheless, this measure struck hard the economy. The above mentioned containment measures influenced aviation, service industry, and tourism in Vietnam, then trade and investment, followed by manufacturing disruption (B&Company Vietnam & BEAN Survey team, 2020). But not only that, widely social distancing also seriously affects the teaching and learning activities of the education system of Vietnam.

Experience from influenza outbreaks has shown that school closure can interrupt virus transmission since it reduces social contact between students (Jackson, Vynnycky & Mangtani, 2016). UNESCO estimated that about 107 countries had carried out national school closures as of March 18, 2020. These closures impacted approximately half of the student population globally (Viner et al., 2020). The case is the same in Vietnam when a lot of schools and universities have closed temporarily. On March 3, 2020, 150 non-public educational institutions made urgent requests to the Prime Minister, ministries, and agencies for support to overcome the difficulties of the current crisis. Otherwise, 90% of the educational facilities will become bankrupt because of unbalanced revenue and expenditure (2020). With the preschool system, hundreds of bankruptcy establishments

will lead to unattended, cared-for children, and parents' work will be affected. Furthermore, trillions of VND would be lost, and thousands of workers, including teachers, would lose their jobs if the situation were unaltered (2020).

However, widespread social distancing causes not only economic problems for educational institutions, but also progress problems for national education programme. Schools can not stay closed forever, and students can not stop learning for too long. In order to timely end the academic year, teaching and learning activities still need to continue either way. The pandamic has finally led to the transformation of teaching and learning strategies from offline (face-to-face) to online (or e-learning) in Vietnam just some months after the outbreak of Covid-19 in the early of 2020. For that transformation, several documents adopted by the Government of Vietnam directly mention pupils/students, and teachers/lecturers, such as: allowing pupils/students to leave school safely(Government Office, 2020) and issuing a priority policy for teachers/lecturers to get a free Covid-19 vaccine (Government, 2021). In addition, the Ministry of Education and Training of Vietnam (MOET) has issued 19 documents to respond to the impact of Covid on the education sector(See Ministry of Education and Training, 2020, 2021).

Although the transformation of teaching and learning strategies taken place in many countries since the outbreak of Covid-19 last year, how has that process happen in Vietnam? And how do the main local actors (teachers/lecturers, pupils/students) feel about that transformation? What factors influence the success of that transition? And how to keep that transition continue and become stable after the end of the Covid-19 pandemic?

This paper attempts to answer the above questions. As a qualitative study, the main research method used in this paper is document analysis, which include related legal instruments of Vietnamese state agencies, along with academic literatures of foreign and local experts. Selected statistical data of local government agencies and international organizations on the situation of Covid-19 pandemic in Vietnam are also examined. In addition, survey report of the online teaching-learning at the School of Law under Vietnam National University Hanoi during the time of Covid-19 is used as a case study for this paper.

The Tendency of Online Teaching-Learning in Vietnam

Before Covid-19 Pandemic

Distance learning, online teaching, online training, open courses/learning materials, virtual classrooms are concepts that refer to a method of education and training that does not require learners to be present and interact directly with the teacher in the classroom. Instead, educational institution delivers materials and lectures to learners via postal mail or Internet-based technology software. This online teaching-learning method is actually not completely new in Vietnam. It has been applied in some local education institutions decades before the Covid-19 pandemic.

Specifically, in the early 1990s, referencing the Open University (OU) model in the UK, the Vietnamese Government established two OUs in Hanoi and Ho Chi Minh Cities. These OUs offered distance learning and facilitated the growing demand for higher education spring from the young and people in rural areas (George, 2010). To be more specific, these OUs send distance learning materials to students within two weeks. Since the late 1990s, those these OUs developed their distance learning service to include video formats, such as VCD and DVD, owing to increased access to computers (Boymal, Martin & Lam, 2007). Distance learning started to evolutionally become e-learning in these two Vietnamese OUs.

Before the outbreak of the Covid-19 pandemic, Vietnamese MOET has assigned some room for e-learning at higher education level by adopting regulations on universities' blended curriculum and programs. The promotion of e-learning fulfills advancing quality and accessibility objectives in the Higher Education Reform Agenda developed by MOET (Pham & London, 2010). E-learning is

however still limited in education system of Vietnam today. While blended learning has been dominant in higher education systems across the world (Boelens, Voet & De Wever, 2018), many Vietnamese universities are still conscious of its advantages, and the application of this approach is still negligible. There are several reasons include: First, majority of Vietnamese educational institutions have not had an intrinsic dynamic to engage educational technology in their circadian rhythm. Second, the Vietnamese Government has not undertaken adequate initiatives supporting and encouraging educational institutions to integrate state-of-the-art technology elements into their regular courses (Pham & Ho, 2020). In short, neither the Government nor the education institutions of Vietnam have prepared for the transformation of learning-teaching strategy from offline to online before the Covid-19 outbreak. Since begining of 2020, they have passively made the transition to cope with the pandemic, rather than actively implemented their planned program.

During Covid-19 Pandemic

After an extended traditional Lunar New Year's break 2020, Vietnamese pupils/students could not return to school due to the Covid-19 pandemic. The Ministry of Education and Training (MOET) imposes 'suspending school, not stopping learning' during the first stage of the COVID-19 pandemic (MOET, 2020). As a result, 110/240 universities in Vietnam adapted from traditional face-to-face classes to online teaching and learning (MOET, 2020). At lower levels of the national education system (primary, secondary and high schools), there is also a large percentage of schools changed their teaching-learning methods from offline to online.

In the pandemic, education establishments must change their teaching-learning method to adapt to the new context. The higher education institutions (universities/colleges) changed to teaching-learning online faster than those of lower levels (primary, secondary, high school) because their students come from many provinces, posing a severe threat to the epidemiological strategy of the Government if they maintaining the offline teaching-learning. For instance, Hanoi Open University and the University of Engineering and Technology created their ecosystem for online teaching-learning promptly to enhance the efficiency of this process (Duong, 2021).

However, therer are some challenges emerged when online teaching-learning became supreme. Firstly, the Internet connection in some rural areas was not strong enough to follow the lessons entirely. Therefore, many pupils/students have encountered this problem and did not know how to solve it [Hong, 2020]. Secondly, since local education institutions did not pay enough attention to technology before COVID-19, many of their teachers/lecturers faced difficulty in preparing for their online presentation and the curriculum, and some of them are unable to purchase equipments for online teaching (computers, cameras, headsets...)(The-Luong & Truong, 2021). Thirdly, the online learning-teaching requires pupils/students stick their eyes to the screen most of the day, which negatively affects their mental health, thereby creating anxiety for many parents (Thuy, 2021). Fourthly, online teaching and learning with primary school pupils forces their parents to temporarily quit their jobs to stay at home to tutor their children, because pupils cannot study online by themselves. As a result, the work of many parents and their agencies and organizations is seriously disturbed (Manh & Thanh, 2020). Last but not least, there have been conflicts between pupils/students' families and the education institutions regarding the request to reduce tuition fees while studying online (Nguyen & Ha Linh, 2020). While some education institutions refused the request for reduction in tuition fees by citing the fact that they still have to pay teachers' salaries and incur additional costs for switching from offline to online teaching, the others have not only reduced tuition fees, but also provided pupils/students assistance such as supporting buying laptops, and accessing Internet broadband. In order to help reducing online learning tuition fee, Vietnam Post and Telecommunications Group offer free Internet service for over 43,000 schools.

However, despite the support for the Internet and laptops, many pupils/students living in the mountainous, rural, and coastal areas of Vietnam could not keep up with these rapid changes.

Therefore, some traditional 'distance learning' techniques were re-applied by local education institutions, such as sending materials to students' addresses for their study. At the same time, local teachers/lecturers created groups using online chat tools, such as Zalo and Facebook, to answer the students' questions or consult about assignments.

In summary, since the outbreak of the Covid-19 pandemic at begining 2020 , there has been a large-scale transformation of teaching and learning methods from offline to online in the education system of Vietnam. The Covid-19 pandemic has forced Vietnamese education institutions to switch to online teaching and learning, although the human and technical sources for that transition are generally not adequate and vary greatly among levels of education system. Although no related survey has been conducted yet, we can see that the degree of success in making transformation in the urban and delta area is much higher than that of mountainous and remote areas. From another angle, the higher levels of education system (university, college, and high school) are more successful in the transition compared to the lower levels (primary, and junior high schools). At the kindergarten level, it is almost impossible to make the transition to online teaching and learning.

Influential Factors to the Success of Online Learning-Teaching: A Case Study

The case study of School of Law, Vietnam National University Hanoi (Nguyen, Nguyen, Nguyen, Nguyen & Pham, 2021) can provid some insights on the process of transformation of teaching methods which is taking place in Vietnam today due to the impact of Covid 19.

This case study aims to measure influential factors to the success of online learning-teaching by doing survey and interview of hunderds of students and lecturers of the School of Law, Vietnam National University Hanoi (hereinafter VNU School of Law). To be specific, the authors divide the inquiry for students and lecturers to understand their satisfaction, obstacles, and pressure when involving in the online learning-teaching. There is a positive statistic in students' assessment of factors in the online learning process. Most of the students showed satisfaction with their teaching methods, flexibility, and adaptability to technology. 65.7% said that the institution had promptly handled problems arising in the learning session. Meanwhile, a minority group encountered difficulty owing to inadequate facilities (i.e., computers, speakers), and their remote area did not have a stable internet connection. (Table 1)

Table 1 STUDENTS ACCESSIBILITY AND SATISFACTION LEVELS WITH ONLINE LEARNING					
Students (254 students/10% attending SOL) (Female: 70%, Male: 28.1%, Others: 2%)	Dissatisfied	Somewhat dissatisfied	Normal	Satisfied	Extremely satisfied
Online teaching methods of lecturers	7%	20.2%	38.5%	24.8%	8.5%
Lecturers' proficiency in technology	3%	23%	41.1%	24%	8.9%
The functionality of the online Library and Information Center (VNU-LIC)	10.5%	25.6%	27.6%	24.1%	12.2%
SOL's managers had responded in a timely manner to unexpected problems arising	8%	24%	32%	23%	13%
The exchange of information and documents and teamwork are very convenient	8.1%	24.1%	32.6%	22.9%	12.3%
Electronic devices for online learning such as	4%	12.1%	17.5%	45%	21.4%
computers, smartphones, webcams, etc. The stability of the internet connection	5%	12%	19.4%	41.6%	22%
Private space for study	13.6%	31%	22%	18.3%	35.1%

In contrast, for lecturers, 68.75% argue that e-learning has more challenges than advantages, and 81.25% were under pressure to design the syllabuses, motivating students. Sometimes, these works affected their mental and physical health indirectly. (Figure 1)

Using United Nations' 4A standards: availability, accessibility, acceptability, and adaptability (Committee on Economic, Social and Cultural Rights, 1999), the authors concluded that the VNU School of Law ensured these standards.
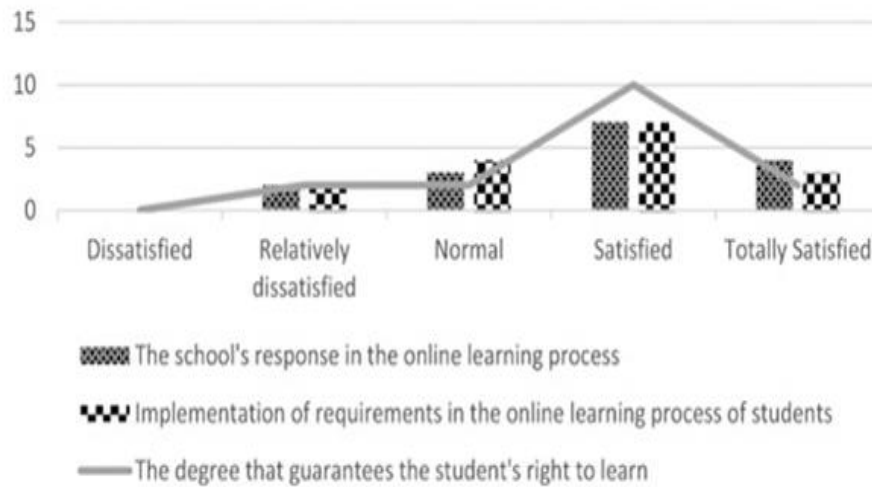

FIGURE 1
RACIAL LITERACY FROM TWINE AND GUINIER

Through the case study, we can argue that there are four influential factors affecting the development and implementation of e-learning, include:

The first was the perception of the feasibility of e-learning, which reflects the extent to which courses can be delivered virtually. VNU School of Law's courses cover a wide range of different subjects. Fortunately, students can virtualize the course contents easily since most of them are documents. Hence, universities need to digitalize these documents into an online database so that students can access all relating resources, such as books, journal articles, cases through an account provided in their first year.

The second is the standardizing of e-learning. Students noted that some elements—ability level, personal preferences, virtual literacy, commitment, allocated time—were probably biased and variable for each faculty member. Therefore, universities need to tailor-make the course to meet the students' expectations and the performance of lecturers. Furthermore, universitíe also need to consider the content format (i.e., Online and offline content) and using multimedia. In this regard, some studies showed that quality, course quality, service quality, and e-learning system quality were related to users' and students' satisfaction with e-learning (Tajuddin, Baharudin & Hoon, 2013). Specifically, their satisfaction is directly and considerably affected their tendency to use e-learning (Cheng, 2012) and acceptance of e-learning (Li, Duan, Fu & Alford, 2012).

The third factor is the lecturers' dedication. Lecturers should smoothly present and transfer scientific knowledge virtually to keep the courses interest to students. From the case of VNU School of Law, we can argue that with appropriate preparation, e-learning could also be successful during the pandemic. However, this process requires lecturers with the ability to use some software for teaching. Also, it would be less efficient if lecturers do not get any technical support from troubleshooting teams.

The last factor is networking and interdisciplinary collaborations. The core value here is that the more interactive, the more enjoyable. Exprience from the case of VNU School of Law shows that, it is crucial to design syllabuses involving as many people as possible. This process would fuel students to contribute more to classes when joining an open-minded educational environment.

1544-0044-25-S2-31

Also from the case study of the VNU School of Law, we can argue to optimize the e-learning process, we need to analyze some advantages of this learning-teaching strategy. First, e-learning empowers students to control their learning. Participants can save their lessons in different forms, including slides and films. This ability is like the longer-term availability of recorded classes (Sadi & Uyar, 2013). Also, lecturers noted that they have more time to revise the content and present it more coherently. Furthermore, (Dyrbye, Cumyn, Day & Heflin, 2009)found that students preferred e-learning due to its flexibility and opportunities for reflection on the course material. For instance, they can download and study learning materials anytime and anyplace. They can still catch up with classes if they missed the face-to-face session. It would suggest that e-learning may facilitate students' learning by controlling this process (Johnson, Hornik & Salas, 2008). The second merit is the perceived usefulness. A common belief is that e-learning enhances a person's job performance (Davis, 1989). By offering many conveniences, e-learning enhances students' learning. If students have this perspective, they are more likely to use e-learning (Islam, 2013). In other words, the perceived usefulness triggers students and lecturers to set a positive attitude towards this learning-teaching strategy since it directly affected the use of educational technologies (Islam, 2013). The third advantage is that the e-learning evaluation is more efficient than the traditional one. Compared with the traditional method (scoring directly), lecturers using an online test (i.e., multiple-choice questions) can save much time since the software's algorithm can simultaneously process an enormous amount of data.

Learning from the limitations of VNU School of Law, we can suggest measures to improve e-learning quality based on the four core components to shape the concept of Education 4.0 proposed by (Miranda, Navarrete, Noguez, & Molina-Espinosa, 2021): (i) Competencies (training and developing desirable competencies in today's students), (ii) Learning Methods (incorporation of new learning methods), (iii) Information and Communication Technologies (ICTs) (implementation of current and emerging ICTs), and (iv) Infrastructure (use of innovative infrastructure to improve teaching-learning processes). (Figure 2).
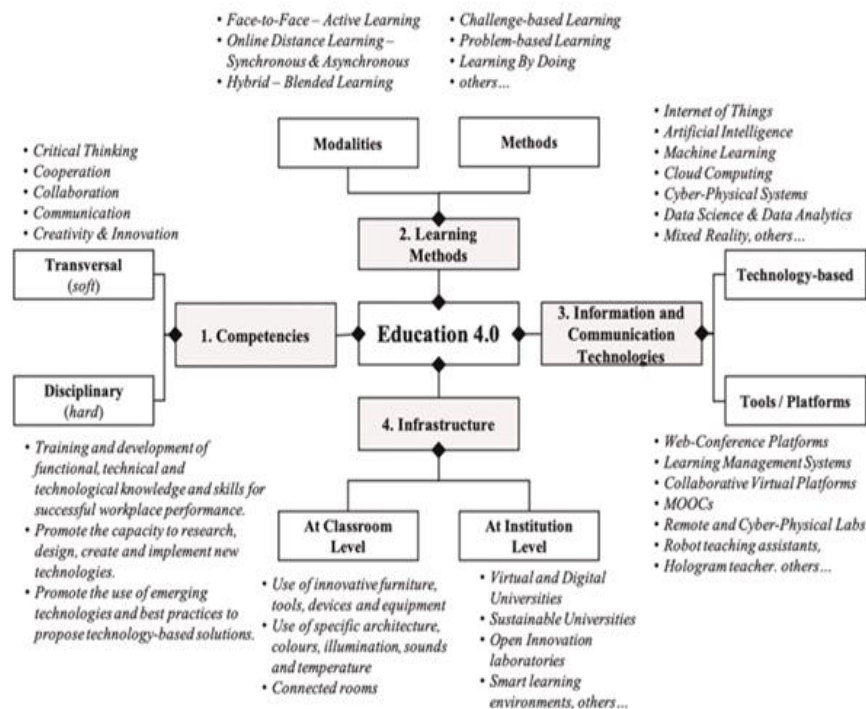
FIGURE2
THE FOUR CORE COMPONENTS OF EDUCATION 4.0 IN HIGHER EDUCATION USED AS A REFERENCE FRAMEWORK

CONCLUSION AND REMARKS

Nowadays, not only distance learning but e-learning, in general, has gradually become dominant in many countries. The evident advantages of e-learning are flexibility, convenience, and cost savings, thereby meeting the learning needs of many students at the same time.

Fostering online teaching and learning is therefore an urgent need for Vietnam today since ncorporation of new educational technologies will prevent Vietnam from falling further behind the global market.

Some research has emphasized Vietnam as a market with one of the most considerable potentials in e-learning globally. For example, Ken Research anticipates that the e-learning market in Vietnam may reach 3 billion dollars in 2023 (Ken, 2019). E-learning has become a practice in various components of Vietnamese education, including English, tutoring (Kim, 2020), and executive training (Tay, 2015). Although the adoption and implementation of e-learning and other educational technology applications are still relatively fledgling in Vietnamese education system, this does not mean that the Vietnamese education institutions are unaware of the advantages of e-learning and educational technology. Instead, it is keenly aware of the need to apply e-learning to education institutions in Vietnam.

The COVID-19 pandemic has brought about an opportunity to foster e-learning's role in Vietnamese education system. During the COVID-19 outbreak, the local education system, especially high education sector, has become an extensive 'laboratory of e-learning.' Teachers/lecturers and pupils/students, despite their attitude toward e-learning, have an enriched experience with learning and teaching online.

Vietnam was the pioneer globally controlling the COVID-19 pandemic (Quach & Hoang, 2020) up to May 2021 mostly based on social mobilization, which also can be used to break the ground in changing teaching-learning methods from offline to online. However, in order to get success in the process of alteration of eeaching-learning strategies, MOET and Vietnamese education institutions should:

- Encourages the integration of both 'distance learning' and 'class' modes of delivery for most education programmes/courses. This initiative helps teachers/lecturers, and pupils/students prepare a smooth transition towards the digitalized era. Moreover, blended learning that combines the two mentioned above is unquestionably the future trend of academic learning in the global context, in which Vietnamese universities are aiming at.
- Official recognition of distance learning/e-learning for Vietnamese education institutions so that they can implement 'blended learning' program widely and legally. In addition, the recognition of distance learning/e-learning allow education institutions establishing quality standards for online evaluation under many forms and pupils/students' attendance. Changing the regime of delivery must maintain the quality of teaching, learning, and assessment.
- Preparation for future education system in a post-COVID-19 world in which distance learning/e-learning will be a "new normal" status. In this regard, the Vietnamese Government should develop a national program to financially support education institutions that have not yet applied e-learning during the pandemic. With this sort of ground, all education institutions can set up universal platforms to operate with the latest management systems. Concerning the e-learning infrastructure, local education institutions will prepare for the global technology advance, and also will remain flexible to social crisis (i.e., COVID-19).

In conclusion, after the COVID-19 pandemic has ceased to be a threat, Vietnamese education system will settle into a 'new normal' with an adaptable teaching-learning strategy. The combination of traditional learning regimes (i.e., delivering materials for students in a remote place) and the new 'distance learning' makes sure that the Vietnamese Government assures its aim – "no one left behind" in education. Hence, the Vietnamese Government needs to support education institutions which are still staying away from distance learning, especially those in remote areas. Besides, Vietnamese educational institutions must also realize the importance and must make their

own efforts to comprehensively transform teaching methods effectively. The adjustability and transformation in teaching-learning strategy in the education system will offer great merits for pupils/students of Vietnam incorporating e-learning to perform well in the digital era, and the young population of Vietnam may catch up with the cutting-edge modern technological trends in the global market.

FUNDING

ACKNOWLEDGMENTS

REFERENCES

Bac, H. (2020). 150 private schools wrote letters "calling for help" to the Prime Minister. Retrieved June 27, 2021, from https://ngaynay.vn/post-87402.html

B&Company Vietnam, & BEAN Survey team. (2020, March 15). An overview of COVID-19 outbreak affecting on Vietnamese social-economy. Retrieved June 27, 2021, from B-Company website: https://b-company.jp/covid-19-en/

Boelens, R., Voet, M., & De Wever, B. (2018). The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning. *Computers and Education*, 120, 197–212.

Boymal, J., Martin, B., & Lam, D. (2007). The political economy of Internet innovation policy in Vietnam. *Technology in Society*, *29*(4), 407–421.

Cheng, Y.M. (2012). Effects of quality antecedents on e-learning acceptance. *Internet Research*, *22*(3), 361–390.

Committee on Economic, Social and Cultural Rights. (1999). *General Comment No.13: The Right to Education*. Retrieved from https://www.refworld.org/pdfid/4538838c22.pdf

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340.

Duong, T. (2021). More universities organize online teaching on Covid-19 prevention. Retrieved July 1, 2021, from VnExpres website: https://vnexpress.net/them-nhieu-dai-hoc-to-chuc-day-online-phong-covid-19-4271195.html

Dyrbye, L., Cumyn, A., Day, H., & Heflin, M. (2009). A qualitative study of physicians' experiences with online learning in a masters degree program: Benefits, challenges, and proposed solutions. *Med Teach*, *31*(2), e40-6.

Franchi, T. (2020). The Impact of the Covid-19 Pandemic on Current Anatomy Education and Future Careers: A Student's Perspective. *Anat Sci Educ*, *13*(3), 312–315.

George, E.S. (2010). Higher education in Vietnam 1986–1998: Education in transition to a new era? In Harman, G., Hayden, M., & Pham, T.N. (Editions.), *Reforming higher education in Vietnam: Challenges and priorities* (31–49). Springer.

Government. (2021). Resolution No. 21/NQ-CP 2021 on buying and using vaccines against Covid-19. Retrieved June 27, 2021, from https://thuvienphapluat.vn/van-ban/The-thao-Y-te/Nghi-quyet-21-NQ-CP-2021-mua-va-su-dung-vac-xin-phong-COVID19-465983.aspx

Government Office. (2020). *Official Dispatch No. 716/VPCP-KGVX on asking for guidance to allow students to leave school to prevent and control the nCoV epidemic*. Retrieved from https://moh.gov.vn/documents/176127/0/CV+cua+VPCP+ve+nCoV02-02-2020.pdf/ee1e3bb2-8114-4d1f-94fa-75a52a8029ea

Hong, H. (2020). *Many students in difficult areas cannot access online learning, Dantri Online, April 17, 2020, Retrieved 20 July 2021, https://dantri.com.vn /Giao-duc-huong-nghiep/rat-nhieu-hoc-sinh-vung-kho-khong-the-tiep-can-phuong-phap-hoc-truc-tuyen-20200417073529686.html*

Islam, A.N. (2013). Investigating e-learning system usage outcomes in the university context. *Computers & Education*, *69*, 387–399.

Jackson, C., Vynnycky, E., & Mangtani, P. (2016). The Relationship Between School Holidays and Transmission of Influenza in England and Wales. *American Journal of Epidemiology*, *184*(9), 644–651.

Johnson, R.D., Hornik, S., & Salas, E. (2008). An empirical examination of factors contributing to the creation of successful e-learning environments. *International Journal of Human-Computer Studies*, *66*(5), 356–369.

Jones, A. (2020). Coronavirus: How "overreaction" made Vietnam a virus success. *BBC News*. Retrieved from https://www.bbc.com/news/world-asia-52628283

Ken (2019). Vietnam e-learning market outlook to 2023 – Driven by rising adoption of smart classes, E-books in schools, MOOCs and smart authoring tools in corporate training and test preparation segment. *Ken Research*. Retrieved from https://www.kenresearch.com/education-and-recruitment/education/vietnam-e-learning-market-outlook/248568-99.html

Kim, T. (2020). Reviewing the 2020 national high school exam online: The optimal solution during the epidemic season. Retrieved July 1, 2021, from Bac Lieu Newspaper website: http://www.baobaclieu.vn/Giao-duc-hoc-duong/on-thi-thpt-quoc-gia-nam-2020-online-giai-phap- toi-uu-in-mua-dich-64367.html

Li, Y., Duan, Y., Fu, Z., & Alford, P. (2012). An empirical study on behavioural intention to reuse e-learning systems in rural China. *British Journal of Educational Technology*, *43*(6), 933–948. Crossref , Google scholar , Indexed at

Manh, T., & Thanh, H. (2020). *Parents struggling to tutor their children learning online at home, VN Express,* 5/4/2020. Retrieved in 17 July 2021 from https://vnexpress.net/bo-me-chat- vat-cream-con-hoc-tai-nha-4079756.html

Ministry of Education and Training. (2020). Official Letter No. 795/BGDĐT-GDĐH 2020 on deploying distance learning to respond to the Covid 19 epidemic. Retrieved June 27, 2021, from https://thuvienphapluat.vn/cong-van/Giao-duc/Cong-van-795-BGDDT-GDDH-2020-trien-khai-cong-tac-dao-tao-tu-xa-ung-pho-voi-dich-Covid-19-437032.aspx

Ministry of Education and Training. (2021). Official Letter No. 442/BGDĐT-GDĐH 2021 on strengthening solutions to prevent Covid-19 epidemic. Retrieved June 27, 2021, from https://thuvienphapluat.vn/cong-van/Giao-duc/Cong-van-442-BGDDT-GDDH-2021-tang-cuong-giai-phap-phong-chong-dich-benh-Covid-19-464351.aspx

Miranda, J., Navarrete, C., Noguez, J., & Molina-Espinosa, J.-M. (2021). The core components of education 4.0 in higher education: Three case studies in engineering education. *Computers and Electrical Engineering*, *93*, 107278.

MOET. (2020). The Information and Communications going along with Education and Training in the preventing Covid-19. *MOET*. Retrieved from https://en.moet.gov.vn/news/Pages/events.aspx?ItemID=3933

Nguyen, T.X.S., Nguyen, T. M. H., Nguyen, P. H., Nguyen, T. H. S., & Pham, B. N. (2021). The right to education through online learning in times of covid – 19: A case study at school of law, vietnam national university. *The Law Teacher*.

Nguyen, D., & Ha, L. (2020). *Controversy about online tuition fees: Proposal to set up an inspection team (Controversy about online tuition fees: Suggestion for inspection), Tienphong Online, June 1, 2020. Retrieved July 15, 2021, from* https://tienphong.vn/tranh-cai-muc-thu-hoc-phi-truc-tuyen-kien-nghi-lap-doan-thanh-tra post1244605.tpo

Pham, H.-H., & Ho, T.-T.-H. (2020). Toward a "new normal" with e-learning in Vietnamese higher education during the post COVID-19 pandemic. *Higher Education Research & Development*, *39*(7), 1327–1331.

Pham, T.N., & London, J.D. (2010). The higher education reform agenda: A vision for 2020. In Harman, G., Hayden, M., & Pham, T.N. (Editions.), *Reforming higher education in Vietnam: Challenges and priorities*, (51–64). Springer.

Prime Minister. (2020). Official Letter No. 121/CĐ-TTg 2020 on prevention of acute respiratory infections caused by Corona. Retrieved June 27, 2021, from https://thuvienphapluat.vn/van-ban/The-thao-Y-te/Cong-dien-121-CD-TTg-2020-phong-chong-dich-benh-viem-duong-ho-hap-cap-do-Corona-433307.aspx,

Quach, H.-L., & Hoang, N.-A. (2020). COVID-19 in Vietnam: A lesson of pre-preparation. *Journal of Clinical Virology*, *127*.

Sadi, O., & Uyar, M. (2013). The relationship between self-efficacy, self-regulated learning strategies and achievement: A path model. *Journal of Baltic Science Education*, *12*(1), 21–33.

Tajuddin, R.A., Baharudin, M., & Hoon, T.S. (2013). System Quality and its Influence on Students' Learning Satisfaction in UiTM Shah Alam. *Procedia Soc Behav Sci*, *90*, 677–685.

Tay, H. (2015). MOOC - a tool for FPT to become a learning organization. Retrieved July 1, 2021, from Chungta website: https://chungta.vn/king-doanh/mooc-cong-cu-de-fpt-tro-thanh-to-chuc-hoc-hoi-1097753.html

Thi, P.T.T., Le, T.H., Nguyen, T.N.P., & Hoang, V.M. (2021). Rapid response to the COVID-19 pandemic: Vietnamgovernment's experience and preliminary success, *Journal of Global Health* (ISSN 2047-2986), Edinburgh University Global Health Society.

Thien, D. (2020). International visitors to Vietnam in February decreased sharply. Retrieved June 27, 2021, from TUOI TRE ONLINE website: https://dulich.tuoitre.vn/news-20200303104232073.html

The, L., & Quan, T. (2020). *Overcoming difficulties in online teaching (Dealing with difficulties in teaching online), Nhan Dan Dien tu*. Retrieved in 20 July 2021 from https://dangcongsan.vn/ban-doc/y-kien-ban-doc/khac-phuc-nhung-kho-khan-khi-day-hoc-truc-tuyen-552299.html

Thuy, N. (2021). *Children 'blurred eyes' because they study online all day in front of the computer (Children 'blurred eyes' because they study online all day in front of the computer),* Vietnam Net. Retrieved in 20 July 2021 from https://vietnamnet.vn/vn/Giao-duc/goc-phu-huynh/hoc-them-cung-online-hoc-sinh-mo-mat-vi-ngoi-ca-ngay-previous-may-jing-713558.html

Viner, R.M., Russell, S.J., Croker, H., Packer, J., Ward, J., & Stansfield, C. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: A rapid systematic review. *Lancet Child Adolescent Health*, *4*(5), 397–404.

World Health Organization. (2021). *Coronavirus disease (COVID-19) advice for the public*. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public