FACTORS OF ACCEPTANCE AND USE OF URGENT ONLINE LEARNING DURING THE COVID-19 PANDEMIC AMONG THIRD-YEAR STUDENTS TAKING AN ENGLISH COURSE AT THE UNIVERSITY OF DANANG, VIETNAM

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ABSTRACT

The outbreak of the COVID-19 pandemic has been affecting every field all over the world, especially education. One of the most obvious changes in education is the transition from on-campus learning to online learning. However, this process requires careful preparation for learners' perception. This study, therefore, aims to investigate the perception of acceptance and use of urgent online learning during the COVID-19 pandemic among Third-year students of the Faculty of English, University of Foreign Language Studies, The University of Da Nang (UFLs, UD). With the main survey method by questionnaires, the study found that attitude, motivation, self-efficacy, and use of technology play an important role in cognitive engagement and student learning outcomes. Based on the aforementioned findings, this paper produces some recommendations for educators and students to improve students' perception of online teaching and learning.

Keywords: covid-19, urgent online learning, acceptance, attitude, motivation, self-efficacy, cognitive engagement

INTRODUCTION

Currently, COVID-19 is one of the most serious problems in the world. This pandemic has brought many challenges to most countries across many sectors and in particular, education at all levels has been profoundly affected (Andreas, S., 2020). Education and training are disrupted, training programs and courses cannot be delivered, teaching and learning are interrupted, exams and assessments are also affected. As a result, completion of qualifications is likely to be delayed, affecting the immediate and future careers of millions of learners (ILO, 2020). This is a challenge for Vietnam as well as many other countries around the world to build a sustainable education system because the COVID-19 pandemic might continue to gravely wound the world.

Facing the stressful situation of the pandemic, the Vietnam Ministry of Education and Training has announced the closure of educational institutions nationwide on February 2, 2020 with the motto "schools can be closed, but learning must continue." In Official Letter 795 / BGDĐT-GDDH dated March 13, 2020 on the implementation of online training in response to the COVID-19 pandemic, the Ministry of Education and Training encourages universities to conduct online training for students. On March 23, 2020, the Ministry of Education and Training issued specific guidance on ensuring the quality of online teaching during the COVID-19 outbreak for higher education institutions in the official dispatch No. 988/ Department of

Education and Training - Higher Education. Following the direction of the Ministry of Education and Training, the University of Danang (UD) has issued two important documents: (1) 958 / DHDN – DT dated March 18, 2020 on the application of online teaching and learning for students to courses that are applying the form of face-to-face teaching and (2) 1222 / UDDH – April 6, 2020 on ensuring the quality of online teaching at UD. However, there were no specific plans and basic training for lecturers and students to use educational technology. Because of this, both lecturers and students have encountered many difficulties in the process of teaching and learning online.

One of the major challenges is the perception of students towards online learning. Learners may find it difficult to maintain participation in online courses due to lack of resources, distance learning experience, etc. (Elizabeth et al., 2020). Moreover, given the fact that students are used to the active social life at school, studying and living with friends, the monotony of social distancing and isolation can cause students to become depressed, lose motivation or sluggish in the long run. The problem now is about what factors affect the perception of using and accepting online learning. By determining these factors, higher educational institutes and lecturers can have a particular strategy to ensure effectiveness, objectivity when applying to practice and to provide a positive learning experience and environment for students.

In addition, how to connect with students especially those living in remote areas with an unstable Internet connection and ensure the continuity of teaching activities through online training also needs focusing. To ensure the effectiveness of online teaching, students also need to have basic knowledge of digital technology and related digital skills (Gina et al., 2021). If technology challenges are not addressed, this method of teaching and learning will greatly affect students' knowledge and academic achievement.

In fact, for the third-year students of the Faculty of English, University of Foreign Language Studies, The University of Danang, they have encountered many difficulties in adapting to online learning. Besides the lack of digital technology capacity, many students have also reflected the factors affecting the perception of urgent acceptance of online learning including motivation, affect, perceived behavioral control, etc. With our knowledge and study of related documents, the factors influencing the perception of pressing use and acceptance of online learning will be outlined. Moreover, it is also vital to conduct qualitative and quantitative research, prove our questions and propose solutions for education institutions and lecturers to improve the quality of online teaching and learning and facilitate students to have a positive view of this form of learning.

LITERATURE REVIEW

COVID-19 has modified the way of life of individuals all over the world. In many countries, people are recommended to keep a minimum distance from others and limit travel as much as possible. Moreover, in order to ensure social safety, social distancing regulations are also implemented in education. Most governments in all corners of the globe have temporarily closed academic institutions in an effort to prevent the spread of the pandemic. According to UNESCO 2020, as of April 8, 2020, around the world, 188 countries were forced to close schools nationwide, affecting 91.3% of the total number of students worldwide. The sudden closure of schools, colleges, and universities has disrupted the teaching and learning activities of nearly 1.6 billion students in the globe.

A number of studies have been conducted to explore the effects of the COVID19 pandemic on learning. In 2020, a group of researchers from Indonesian universities has

concluded in the study "University Students Online Learning System During COVID-19 Pandemic: Advantages, Constraints and Solutions" that the advantages that private university students have found when learning online including they can listen to lectures at home, anytime, anywhere; not limited by space and time; they can listen to the lecture again in their free time. However, the Internet connection is unstable which has affected the learning quality of students or lectures and teaching materials do not appear at the same time are the existing problems.

John Demuyakor's results in the report "Coronavirus (COVID-19) and Online Learning in Higher Institutions of Education: A Survey of the Perceptions of Ghanaian International Students in China" (John, 2020) in 2020 showed that students are satisfied with the quality of online education in the Institute of Higher Education in Beijing, China. Students' perception of the effectiveness and reliability of online learning programs received the highest score (3.77), and students' online teaching and learning problems witnessed the lowest average score (3.51). These results confirm that despite some challenges, students at different universities are satisfied with online learning and teaching.

The research paper "Pandemic, social distancing, and social work education: students' satisfaction with online education in Vietnam" conducted by Linh and Trang (2020) concluded that students face several problems when participating in online courses due to the quality of Internet access, such as intermittent connections and low-quality audio. However, most students said that the aforementioned difficulties can be overcome. Student's satisfaction with learning face-to-face was significantly higher than with online across all criteria. Therefore, a long-term strategy is required to improve activities and interactions when teaching and learning online.

Currently, there are few research papers focusing on factors impacting students' perception of use and acceptance of urgent online learning as well as a preliminary exploration of digital technology capacities for foreign language learners during the pandemic. Therefore, this is a new and potentially exploitable area for further study in Vietnam. In addition, due to the lack of study in this issue which can have an influence on third-year students, UFLs, UD, it is necessary for researchers to evaluate the factors influencing the perception of using and accepting technology of this population.

The Theory of Reasoned Action (TRA)

Although the TRA model was first developed in 1975 by Fishbein and Azjen for sociological and psychological research, it has now become the foundation for investigating information technology usage behavior of individuals. In this model, all human's behaviors are predicted and explained through 3 main cognitive components including attitudes (a person's feeling of liking or disliking the behavior), social norms (the influence of society on the subject), and finally the intention of the subject (the decision to perform or not to perform a behavior). These human behaviors must come from intention, systematization, and moderation.

The technology acceptance model (TAM)

The Technology Acceptance Model - TAM is a derivative of the Theory of Reasoned Action model - TRA. The TAM model explains users' motivation to use technology based on the following three factors: perceived benefits that technology brings, perceived ease of use, and users' attitudes towards using technology (behavioral intention).

Kemp et al. (2019) analyzed different technology acceptance models and developed a taxonomy of cognitive forming factors for the use of educational technology by students or lecturers in educational institutions. The taxonomy includes seven main factors: 1) attitudes, affect, and motivation; 2) social factors; 3) usefulness and visibility; 4) instructional attributes; 5) perceived behavioral control, 6) cognitive engagement, and 7) system attributes. Although all of the above factors have impacts on the process of applying technology, this study will only focus on the main factors relating to student's behavior or attitude. Factors that will be studied include attitudes, affect, and motivation; perceived behavioral control; and cognitive engagement. Lecturer-focused factors (instructional attributes), technology design (usefulness and visibility, and system attributes), or social factors will not be studied. The sudden shift to online learning has left lecturers and professionals insufficient time to plan appropriate online instructions.

Attitudes, affect and motivation

Attitude towards behavior (TRA, TPB) plays an important role in attitude and is a factor influencing behavior. López & López (2011) suggested that attitude was influential as a prominent mediator in the voluntary context. Chau also demonstrates "significantly positive effects" (Chau, 2001, p. 30) when attitude is a precondition for both usefulness and ease of use. Attitude is defined as an individual's positive or negative feelings when presenting a behavior with a clear purpose. Therefore, when an individual has a positive attitude towards a behavior, the likelihood of performing that behavior is higher (Tsang et al., 2004), or the attitude has a positive influence on the actual action (Lin, 2011; Mazhar et al., 2014). Teo et al., (2017) found that attitudes can also involve personal aspects rather than being directly technology-oriented, so the experience of the lecturer can directly affect students' attitudes.

Affect: User enjoyment was defined as the degree to which a user feels truly satisfied and enjoyable to use (Martinez-Torres et al., 2008, p. 498). It has been shown to have "a significant influence regarding intent" (Davis et al., 1992, p. 1111). User satisfaction ("the degree to which users feel satisfied with the information systems they have used") (Lee & Lehto, 2013, p. 195) is simply an emotional state.

Motivation: Learning motivation was defined as "the learner's motivation to learn" (Huang & Liaw, 2018, p. 95). Goal orientation was defined as "the motivation towards achievement through the learning process" (Cheng, 2011, p. 275). Both learning motivation and learning goal orientation have their own characteristics that affect does not. Recognizing the latent "satisfaction" aspect of intrinsic motivation (Vallerand, 1997), Kemp et al. (2019) suggested that motivation must be associated with emotion, although its guiding factor is another separated characteristic.

Perceived behavioral control

Abdullah & Ward (2016) demonstrated that there is a link between a user's progress in skill development and their prior experiences. It means that the user's previous experiences have partly influenced the perception of ease of use or self-efficacy in technology skills, thereby changing the attitude of users. There are studies that show that, in fact, the use of embedded systems (Wikis) has a positive effect on users' trust and incessant use of technology (Yueh et al., 2015). The degree of confidence for computer usage was also defined by Teo (2009) as follow:

'A person's degree of confidence in his or her ability to use a computer' is defined as 'the person's assessment of his or her own ability to use a computer'
(Teo, 2009, p.304)

This concept is different from the concept of self-efficacy in online learning. Self-confidence is defined as finding information and communicating with lecturers through the online educational platform and the skills needed to use it (Park, 2009, p. 152). Similar to the degree of confidence in their own abilities in online learning, learners also need to have access to digital technology ("the degree of ease of access to the online education system provided by the universities as an organizational element" Park, 2009, p. 153) and mobility ("the ability to use cloud applications via mobile phones in a manner freedom without limitations in space and time", Yadegaridehkordi et al., 2019, p. 85).

Cognitive engagement

The review by Kemp et al. has outlined the effects of cognitive perception ("a state of deep involvement" Saade & Bahli, 2005, p.320) and flow state ("a person's state when they participate fully and enjoy the process" Saade & Bahli, 2005, p. 318) on learner attitudes, and concentration levels ("the extent to which users maintain full attention and focus on their activities" Liu et al., 2009, p. 602). Accordingly, the concept of "vividness" ("the ability of technology to create a lively medium" Steuer, 1992, p. 80) considers the richness of the senses. "Vividness" is also related to the cognitive process and is separate from the concept of content diversity (under the influence of many types of media). Lee et al. (2009) argued that, in terms of focusing attention and enhancing curiosity, "playfulness" is considered as a measure of the flow state. All three factors: absorption, vividness, and playfulness are related to learners' attention, concentration and receptivity.

The research questions in this study are:

1. What are the factors affecting the perception of use and acceptance of urgent online learning among third-year students of the Faculty of English, UFLs, UD?
2. How are the factors affecting the perception of use and acceptance of urgent online learning among third-year students of the Faculty of English, UFLs, UD?
3. What are the difficulties faced by third-year students of the Faculty of English, UFLs, UD when studying online during the COVID-19 pandemic?
4. What optimistic changes have been experienced by the third-year students of the Faculty of English, UFLs, UD after transferring to the urgent online learning during the COVID-19 pandemic?

METHOD AND SAMPLING

Sampling

The research was conducted at UFLs, one in five regional centres appointed by the Vietnamese Ministry of Education and Training, and the National Foreign Language Project to address the challenges of ICT (Information Communication Technology) in foreign language teaching and learning. In this study, we selected the research population who are third-year students of the Faculty of English, University of Foreign Language Studies, The University of Danang. The study is limited to this population for the following reason: third-year students who have spent 2

semesters of online learning due to the impact of the COVID-19 pandemic, specifically the second semester of academic year 2019-2020 and the first semester of the academic year 2020-2021. With these experiences, the students have enough time to realize the positives and negatives of online learning as well as they can understand which factors have influenced their personal perception in the usage and acceptance of urgent online learning.

We have conducted a random survey on 250 third-year students, Faculty of English, UFLs, UD. During the survey using questionnaires, we excluded those with blank or invalid answers. The number of valid survey questionnaires is 228.

Data collection

The research combines three main methods: documentary research, qualitative research, and quantitative research.

Documentary research method

Domestic and international documents related to the factors influencing students' perception of using and accepting urgent online learning have been collected and selected from previous works. Based on that, related studies on this issue have been analyzed, synthesized, and evaluated in order to build a theoretical basis, design research tools, and opt documents used in the process of analyzing, interpreting, and evaluating results obtained from reality. Finally, how these factors affect students' perception of using and accepting online learning has been evaluated.

Qualitative research method

Students answered open-ended questions attached to the questionnaire to determine challenges and sanguine aspects encountered during social distancing. Two open-ended queries are: "What difficulties have you ever encountered in your learning process throughout the COVID 19 pandemic (learning surrounding factors, financial status, emotions, etc.)?" and "Describe optimistic changes and/or aspects you have experienced since practicing COVID-19 stay-at-home order."

Quantitative research method

After examining the theory of factors modifying the perception of educational technology use undertaken by Andrew et al. (2019), we have built a questionnaire system focusing on attitudes towards face-to-face and online learning, learning motivation, ease of use, self-efficacy, accessibility, and cognitive engagement.

Data analysis

A total of 250 students responded to our online questionnaire hosted on the Qualtrics platform, in which there were 22 invalid answers.

Quantitative data were analyzed with the software SPSS (Statistics Package for the Social Science). The reliability of the questionnaire is computed. Descriptive Statistics would be used to determine the mean scores of the factors affecting student's perception towards the usage and acceptance of urgent online learning methods.

Qualitative data were examined with Dedoose 8.3, qualitative software for coding. The responses were then grouped into the major themes constituting the disadvantages and advantages of online learning.

FINDINGS AND DISCUSSION

Attitude, affect and motivation

Table 1: Attitude and affect in urgent online learning

Item	n	M	SD
Attitude – Prefer in-person	228	4.68	0.79
Attitude – Prefer online learning	228	2.65	0.76
Having problems in learning online	228	3.69	0.87
Affect (Satisfaction with online courses)	228	3.01	0.72

From the data table, it can be seen that students expressed a stronger interest in face-to-face learning than online learning, $t_{(228)} = 14.78$, $p < 0.05$. Furthermore, students who preferred face-to-face learning had more difficulty adapting to online learning. The received responses demonstrated a high correlation between preferring online learning and difficulty in adapting to online learning $r_{s(228)} = 0.628$, $p < 0.05$. Further discussing this issue, students' on-campus preferences are similar to those found in previous studies (Bali & Liu, 2018; Tichavsky et al., 2015), but the experiences cannot be compared with those in the present situation. Students were taking part in urgent online learning but have not been given proper guidance and planning (Daniel, 2020; Murphy, 2020).

With regard to students' opinions about online learning, 100% of students said that they used computers for learning purposes, but students themselves felt that they had an average ability of about 59.4% to use online learning support platforms (MS Teams, LMS, etc.). The difficulty of online learning can also partly explain why students find it difficult to acquire new knowledge through reading (24.56%), and watching on computer screens (25.44%).

In this paper, students are required to self-assess their digital literacy, specifically the ability to use the following digital technology platforms to cater to online learning: word processing applications (MS Word); spreadsheet application (MS Excel...); database applications (MS Access...); presentation applications (MS PowerPoint...); communication applications (Zalo, Messenger...); learning management system (Moodle...); file sharing sites (Google Drive...); search engines (Google, Coccoc, Opera...); online dictionary (Oxford.com...). The results will be presented in the perceived behavioral control section.

Table 2: Correlation between digital capacity and attitude towards online learning

		Self-assessment of digital technology capacities	Attitude – Prefer online learning
Self-assessment of digital technology capacities	*r*	1	.641**
	p		.000
	N	228	228
Attitude – Prefer online learning	*r*	.641**	1
	p	.000	
	N	228	228

**significant $p < 0.05$

However, after putting these factors into comparison, we realized that there was no correlation between digital capacity and attitude to face-to-face learning preferences. Meanwhile, there was a strong positive correlation between digital capacities and attitude to online learning predilection. This proved one thing: the more digitally competent students are, the more likely they are to prefer online learning.

When analyzing the correlation between digital technology capacities and students' difficulties in online learning, the negative correlation $r_{(228)} = -0.332$, $p < 0.05$ could be taken for granted. The more students perceived themselves to have good digital capacities, the more they would feel that there was no difficulty in learning online and vice versa. Several previous studies (Liaw & Huang, 2011; Rhema & Miliszewska, 2014) have shown that students' skills in the field of digital technology were a significant factor affecting students' attitudes towards online education. From those results, it could be seen that digital literacy and technology issues in online learning are related.

Table 3: Motivation in urgent online learning

	N	M	SD
Motivation – Before social distancing	228	3.57	0.47
Motivation – After social distancing	228	2.75	0.58

Students continued to assess their perceptions of the factors which boosted their motivation to go to school after the social distancing order was implemented. The answers had a high level of confidence (Cronbach's alpha = 0.85). We have calculated the average score for the 7 factors "before" the social distancing order and the average score for the 7 factors "after" the social distancing order. The result indicated that students were more motivated "before" social distancing order than "after", $t_{(228)} = 6.69$, $p < 0.05$.

Regarding motivation to continue learning during social distancing, quantitative and qualitative data have shown that students were more motivated to study prior to the implementation of the stay-at-home order. Consistent with the existing literature (Albelbisi & Yusop, 2019; Sun et al., 2018), this study determined that when students were unmotivated, the level of cognitive engagement decreased and vice versa. Clearly, motivation has boosted the student's persistence in performing certain tasks.

Similarly, the conclusion of this study confirmed that student motivation has decreased when switching to online learning and that interaction was a motivating factor for students. In the qualitative data, the students said that the lack of interaction with lecturers and other students was a challenge for them. When students were unable to choose a learning method according to their personal preferences and must use online or hybrid methods, lecturers needed to consider student's motivation. As Bower (2019) mentioned, "in the context of technology-mediated learning, the actor's intent lies with the people, not the technology" (p. 1037). Although emotions were not surveyed in the quantitative data, in the open-ended questionnaire, 25 students (14.45%) wrote that anxiety and boredom were a challenge that increased negative emotions. Excessive anxiety could limit motivation and negatively impact achievement while pride tends to positively impact intrinsic motivation, academic effort, and achievement (Heckel & Ringeisen, 2019).

Perceived behavioral control

Perceived behavioral control relates to the advantages or disadvantages of using technology for student education. It includes students' perceptions of ease of use, self-efficacy, and access to technology.

Ease of use digital technology in learning

Table 4: Proficiency in using digital technology in urgent online learning of students before and after the social distancing order

	n	M	SD
Level of technology use - Before social distancing	228	2.73	0.73
Level of technology use - After social distancing	228	4.07	0.77

Students were asked how often they used technology platforms before and after the social distancing order. After calculating the average score, the data showed that students had a mounting frequency of using technology platforms for learning after the stay-at-home order when compared to before, $t_{(228)} = 20.83$, $p < 0.05$. This study indicated that students have used more online educational platforms and tools after switching to online learning. As mentioned by Murphy (2020), the use of urgent online learning programs increased students' knowledge of technology tools. The knowledge and experience gained could help students get more confidence in their ability to use online education technologies to support their future careers and life.

Self-efficacy in online learning

Table 5: Student's self-efficacy in urgent online learning

	n	M	SD	t	
Ability to complete assignments on time	228	2.61	0.71	12.88	**
Proficiency in using new learning tools (Analyze/create videos, online quizzes, etc.)	228	3.70	0.98	10.75	**
Ability to get good grades in classes	228	2.40	1.07	5.65	**
Possibility to discuss topics with classmates and/or lecturer	228	2.47	1.01	6.96	**
Time management skills	228	2.65	0.83	12.15	**

**significant $p < 0.05$

One-sample t-test with a mean of 3 has been applied. The analysis data showed that students had little skill development in 4 out of 5 questions asked: Ability to complete assignments on time; ability to get good grades in class; the ability to discuss topics with classmates and/or lecturers; time management skills. Only the item "Proficiency in using new learning tools (Analyze/create videos/online quizzes, etc.)" was assessed by students as having an improvement after the online learning process.

Table 6: Correlation between digital capacity and self-efficacy

		Self-assessment of digital technology capacities	Self - efficacy
Self-assessment of digital technology capacities	*r*	1	.612***
	p		.000
	N	228	228
Self – efficacy	*r*	.612***	1
	p	.000	
	N	228	228

**significant $p < 0.05$

It could be seen that digital technology capacity also contributed to confidence in students' own abilities in the process of participating in online learning, which was clearly shown in the strong correlation between the two factors $r_{(228)} = 0.612$, $p < 0.05$.

Another important factor for the successful adoption and use of online learning (either urgent or not) was self-efficacy. The conclusions of this study are consistent with previous studies that found that students who applied multiple self-regulation strategies were more likely to complete academic tasks (Abdullah & Ward, 2016; Alghamdi et al., 2020). Self-efficacy affects exercise choice, effort, persistence, and achievement; simultaneously it is directly related to the expectations and learning outcomes of students (Alghamdi et al., 2020).

Opportunities to access digital technology in learning

The data has shown that the reliability of the question was very high (Cronbach's alpha = 0.748). Students have access to technology tools at a constant level most of the time, $t_{(228)} = 36.84$, $p < 0.05$.

Table 7: Level of awareness about opportunities to access digital technology in urgent online learning of students

	N	M	SD
A reliable digital device (e.g. computer, tablet, mobile device)	228	3.45	0.565
A reliable Internet service	228	2.96	0.813
Communication software/tools (e.g. Skype, Zoom, Teams, Google Classroom)	228	2.65	0.921
Support service to solve technical problems	228	2.01	0.919

Cognitive Engagement

Cognitive engagement involves the learner's enthusiast and receptivity. The answers showed that the reliability of the question was extremely high (Cronbach's alpha = 0.816). Surprisingly, students felt no improvement in their scores. But students all reported there was a decrease in the remaining 5 factors: Knowledge; Concentration; Level of interaction; Attendance; Attention and enthusiasm. The average score of the student's assessment has a decrease, $t_{(228)} = 3.57$, $p < 0.05$.

Table 8: Changes in students' urgent online learning

	n	M	SD
Academic results	228	2.58	0.56
Knowledge	228	2.17	0.79
Concentration	228	2.01	0.76
Level of interaction	228	2.59	0.77
Attendance	228	2.44	0.85
Attention and enthusiasm	228	2.99	0.87

The role of cognitive engagement

We have tested different data to see correlations between variables. When comparing students' attitudes towards knowledge delivery methods and cognitive engagement, we found that there was a negative correlation that occurred between in-person learning preference and cognitive engagement $r_{s(228)} = -0.392$, $p < 0.05$. This meant that if more students preferred face-to-face learning, students' cognitive engagement would be reduced and vice versa. When students preferred online learning, cognitive engagement increased of $r_{s(228)} = 0.670$, $p < 0.05$. Students' attitudes and their cognitive engagement are deeply linked to online learning during the COVID-19 pandemic.

Likewise, motivation and self-efficacy were related to cognitive engagement. We compared the motivation to go to school after the COVID-19 pandemic with the cognitive engagement and obtained data showed that these factors strongly correlated with each other, $r_{(228)} = 0.340$, $p < 0.05$. The more motivated the student, the better their cognitive engagement was. Furthermore, there was a positive correlation between self-efficacy and perceived engagement $r_{(228)} = 0.696$, $p < 0.05$. Student expectations and their self-efficacy were closely related to their academic performance.

Perception of self-efficacy

Self-efficacy is an important factor in the success of online learning (Albelbisi & Yusop, 2019). We have analyzed the factors affecting self-efficacy. Also, we have compared student's previous experience and knowledge of technology with their self-efficacy. If they have used technology before, it will be easy for them to use it again (Kemp et al., 2019). Participants' responses showed that there was a strong correlation between technology use before the COVID-19 pandemic and self-efficacy $r_{s(228)} = 0.373$.

The study also showed a negative correlation between preferring face-to-face learning and self-efficacy, $r_{(228)} = -0.392$, $p < 0.05$ (students believed that they would not succeed, and it was related to negative attitudes towards the method of knowledge transmission.) In contrast, students who preferred online learning had a positive correlation with self-efficacy $r_{(228)} = 0.537$, $p < 0.05$.

Students' access to technology and learning environment

Accessibility refers to the student's possibility to connect to the Internet, device reliability, and technology support. Connection is closely related to online teaching. In light of the COVID-19 pandemic and the closure of educational institutions, students had to stay at home, therefore, connection to technology tools and supports may change. Therefore, we have compared the accessibility to digital technology with cognitive engagement and the data showed the

correlation $r_{(228)} = 0.473$, $p < 0.05$. Not surprisingly, the lack of accessibility (equipment, support, Internet connection, etc.) was related to students' cognitive engagement.

Finally, universities must be aware that accessibility is critical to a successful online learning experience. As the results from this study, accessibility is not only related to accessing the Internet or a digital device, it is also relevant to the learning environment. One of the students who participated in the survey wrote that since the pandemic broke out, she has had to leave Da Nang and return to her hometown with her family. Since the time of social distancing, she has expressed her difficulty to continue studying. Firstly, her family doesn't have Internet connection, so she had to go to a neighbour's house to connect to the Internet. Second, she has had to help her mother take care of her siblings, so access to educational technology tools has been nearly impossible. Clearly, her cognitive engagement was severely reduced. This study cannot reach students like her because it is an online survey, but we need to understand that there are students who lack accessibility, and accessibility is directly related to cognitive engagement.

Qualitative data – difficulties and optimistic changes throughout the time of COVID-19: Difficulties encountered

Table 9: Difficulties and optimistic changes in students' urgent online learning during the COVID-19 pandemic

	Theme	Category	Number of students
Difficulties	Situational and environmental difficulties	Getting distracted at home	40
		Financial difficulties	28
		Inefficient in-person communication	22
		Balancing work/study – life	16
		Natural disasters	12
	Online learning difficulties	Unfamiliar with online technology	39
		Exercise volume increased	25
		Reducing interaction	19
		Decline educational quality	13
		Lack of academic support	10
	Emotional difficulties	Lack of motivation	23
		Procrastination	21
		Pessimistic feelings	15
Optimistic changes	Advantageous revision	Reviewing lessons easily	32
	Self-development	Self-care	24
		Learning new skills	21
		Time management skills	16
		Staying in shape	11
	New gaining	New hobbies	35
		Understanding family better	29

Three themes stem from the difficulties: Situational and environmental difficulties, online learning difficulties, and emotional difficulties. The research results are arranged in descending order of the mentioned difficulties.

a. Situational and environmental difficulties

Students said that their biggest difficulty is staying focused at home. There were many distractors such as distractions from other family members, surrounding noise, and other

commitments. In addition, many students perceived home as a place to rest, not entirely to study, so staying focused was extremely difficult. The students wrote: "A lot of irritating situations have happened in my family. Sometimes I can't concentrate on lectures" or "I work better in an environment separating from my family".

The second trouble is financial difficulties during the pandemic. Some students wrote: "I barely have money to live on." In addition, some students also said that due to the impact of the pandemic and natural disasters, their families could not afford tuition fees for the next semesters.

Another challenge is that students lacked regular communication with their friends or lecturers while communication is an indispensable human need. It was also mentioned that difficulties in coordinating private life, work, and study were puzzling problems. Here is a representative quote: "It is difficult for me to focus on studying while taking care of siblings and doing housework." Other drawbacks students mentioned were inefficient in-person communication and impacts of natural disasters (loss of lives or crops, evacuation, etc.).

b. Online learning difficulties

Another major difficulty reported is the lack of familiarity with online technology. One student said, "I feel tired when looking at screen for a long time". Another student with tremendous comment: "I find that it's very tough for me to learn online because of the lack of knowledge about technology. Firstly, I don't know how to use those platforms for my study because I haven't been taught about them. Secondly, the Internet connection is another barrier of online learning. I am a student, mostly living in rental house so my Wi-Fi connection is not strong enough to join a class without losing Internet connection in the midway". Moreover, students also found it hard to understand the academic materials provided by the lecturers.

The next concern that was mentioned more often is that some students reported being stressed by the increased workload and having issues because they are not familiar with some online tools. The student wrote: "The lecturers assumed that I had much spare time due to the pandemic, so that they increased the quantity of homework. However, I had to complete homework in many different courses, so the increasing amount of homework made me feel so pressured."

Furthermore, students reported that they have also encountered several problems in interacting and communicating with lecturers. It is challenging for students to ask questions directly to the lecturer as soon as they feel curious. In addition, the quality of the learning process has declined after switching to online learning. Here is a representative quote: "The noise is one of the disruptions to my study. I can't concentrate on my lesson because of the noise from lecturers, friends, as well as my neighbourhood. It leads to the fact that my learning quality is significantly reduced". Finally, the lack of academic support resources to complete school assignments was also a challenge for some students. The student said, "I can't use and practice other learning methods like group study or library research."

c. Emotional difficulties

One of the most common difficulties lecturers faced is the reduced students' learning motivation. After a period of online study, students often forget the reason why they signed up for the course, and the spirit of studying was sluggish. The student wrote: "I have the feeling that learning now is no longer as vital and fascinating as it used to be, which makes me lose lots of motivation" and "no motivation to do anything if I don't even want to leave my room".

Because of a lack of motivation, many students reported that they have procrastinated on many personal projects, including those intended to improve their major knowledge. In addition, students also experienced anxiety and stress, especially worrying that they could be infected with COVID-19. The student wrote: "I am so nervous that I can't concentrate on anything. I am afraid that I will be isolated for a long time and that will greatly affect my academic performance".

Optimistic changes linked with the COVID-19 pandemic

Three themes related to positive aspects and/or changes that students experienced after social distancing include: advantageous revision, self-development, and new gaining. The research results are arranged in descending order of the sanguine aspects mentioned.

a. Advantageous revision

Online learning helped students grasp the lectures better because the lecturers would speak or record the lessons through the micro and when listening to the lectures, the sound would be very clear and easy to hear. Second, in online classes, lecturers often recorded lessons and uploaded them to the school's intranet, so students could easily review the lectures at any time.

b. Self-development

One category mentioned by many students was self-care. Staying at home allowed students to look back on their own shortcomings and limitations and then found ways to overcome and change. A representative quote is as follows: "Stay-at-home order allows me to spend more time taking care of myself. I take advantage of this time to look after my skin and body."

The category mentioned as a benefit of social distancing was to learn new skills. Students said they have learnt to use new technology tools such as Zoom, MS Teams or LMS and at the same time, they lived more organized and disciplined. Furthermore, some students have become self-directed, signing up for certification courses or trying to learn a new language. One student wrote, "During this "online learning" period, I can learn from alternative online platforms and easily have a research on my subject to understand lessons profoundly."

Moreover, this period also helped students know how to manage their personal time more effectively. They had to actively schedule a time to attend online lessons, complete assignments in many subjects, and do housework. In addition, students would spend their free time practicing sports to improve health during the pandemic so that students could get in good shape.

c. New gaining

Participating students expressed that they had more time to change themselves and that they were doing activities they had never done before such as reading or cooking. One student wrote, "I have time to do the things I've wanted to do for a long time but haven't been able to do it yet, such as gardening and decorating. This is a very nice opportunity for me." Another category on this topic was a better understanding of the family. Many students share the idea said that: "As I have to stay at home all day, I spend more time with my family than ever. Thanks to that, I got to know my family members better and I really appreciate this time".

CONCLUSION

This study explores university students' perceptions of the use, adoption, and acceptance of urgent online learning during COVID-19 social distancing regulations. Obviously, face-to-face education has an overall ecosystem designed to support learners (learning centre, extracurricular activities, library, etc.). Similarly, online learning requires time to define and build (Hodges et al., 2020). In urgent situations, (another wave of COVID-19, hurricanes, wars, etc.), it is important to remember that online education or hybrid education must be an urgent response that is innovative and feasible for each specific crisis and requires more reflection and interaction than any previous educational experiences.

The results showed that students' motivation, self-efficacy, and cognitive engagement decreased after the transition to online learning, while the ability to adapt to new technologies was significantly improved. The crisis brought about by COVID-19 is not over yet and we need to meet the wants and practical needs of our students if we want them to continue to have positive higher education experiences.

Knowledge is important, but without the right conditions, students may again undergo negative experiences and consequently their cognitive engagement declines. The study showed that lecturers must be aware of these negative changes; at the same time, encourage and motivate students to construct new knowledge on the groundwork of their prior understanding. When all universities understand the difficulties that students are facing, they will find reasonable solutions to overcome these problems.

More researches are required to explore how inequality affects student learning opportunities and outcomes. Some students do not have access to technology tools and/or family conditions limit their access. The future works had better reach this sample and understand the short and long-term effects the pandemic may have on them (dropping out of school, failing exams or dropping projects). This will be the most effective way to create the right strategies and resources to help all students continue their education feasibly.

Furthermore, it is important to understand how COVID-19 affects lecturers' teaching styles and/or strategies. The lecturer's teaching experience and the student's learning experience can share the correlativeness. Universities, colleges, lecturers, and students have faced different challenges posed by the pandemic, and these challenges have had unintended consequences for teaching and learning.

It is essential for further researches on this field in the future to assess whether a short training session on self-efficacy and motivational strategies for students can improve their cognitive engagement in the process of studying online or not. The training session can occur just in a short time at the beginning of each course, presenting a short video explaining the relationship between attitudes, self-efficacy, cognitive engagement, and some applied strategies. The right perception can motivate students to study harder.

The pandemic has changed the social and working lives of many people. More works are required to understand why the lack of physical contact, reduced social interaction, and the negative emotions that the pandemic created (fear, sadness, uncertainty, etc.) could impact students' daily habits (eating, sleeping, watching TV...) and whether changes in the environment and students' daily life have any relationship with their learning process.

Finally, it is important to compare students' perceptions of the use and acceptance of urgent online learning across different countries. It will help higher education institutions identify similarities and differences, thereby developing appropriate strategies in light of the pandemic that has affected most countries around the world. This is a challenge we all face, and we can help each other to cope with it effectively.

RECOMMENDATION

The transition to online training due to the impact of the COVID-19 pandemic is a great challenge for tertiary institutions in general and UFLs, UD in particular. Based on the conclusions and results collected during the research, we have found the causes affecting the perception of acceptance and the use of educational technology platforms for urgent online learning by third-year students, UFLs, UD in the period of social distancing. On that basis, we propose some solutions to help universities, colleges, lecturers, and students overcome some of the difficulties in the online learning process as follows:

For higher educational institutes, it is important to explain to students that their attitudes can affect (positively or negatively) their learning experience and cognitive engagement so that students can try to consciously improve their attitudes towards urgent educational methods. As mentioned by Bandura (1977), expectations were mainly related to people's hopes for favourable outcomes.

For the 3rd year students, UFLs, UD, most of the courses are taught in different languages. Supporting materials, reference materials, self-practice exercises (in the form of text or audio) are essential for them. Some students think that online learning does not bring as good results as face-to-face learning method and makes it difficult for both learners and lecturers because of technical problems or manipulations. Using educational technology platforms takes time and hinders teaching and learning activities. However, these students did not know that online learning did not bring the results they wanted, partly because of themselves (Hodges et al., 2020; Murphy, 2020). Most of the inconveniences and difficulties stem from students who have not had much experience with digital technology platforms. Therefore, in order to solve this problem immediately, we recommend that the institutes organize training sessions on the use of digital software or short-term training courses on technology capacity in order to improve online teaching and learning skills. Digital technology skills will help students quickly adapt to the current situation and change their way of thinking when it comes to online learning. Organizing training sessions to deal with problems arising in the process of online teaching are also essential for lecturers.

To be able to participate in urgent online classes, each student must spend a certain amount of money to purchase equipment and sustain a high-speed Internet connection. Therefore, immediate support from the universities and colleges in such critical situations is essential, such as supporting gifts from faculty leaders and sponsors. The policy of tuition exemption and reduction for students whose parents have lost their jobs or were temporarily absent from work due to the consequence of the COVID-19 pandemic could give a lot of motivation to students to continue their studies.

This study recommended some suggestions for lecturers. In addition to the lack of reference sources, during the survey, we received some feedback from the students about the difficulties they encountered when finding the mid-term or final trial tests, types of audio files related to listening and translation skills. Lecturers should provide students with sample tests or reference sources with the same structure as the real exam so that students can have a more general view of the exam as well as shape and systemize the types of knowledge they have learnt.

Lecturers should also supply academic and reference materials to avoid students using unorthodox materials, making it difficult to study and research, and moreover to help them be more active in their studies.

Most of the teaching activities for third year students, UFLs, UD are undertaken by using the MS Teams application. However, most of the video recordings of lessons after being saved

into the system by lecturers are very large in size and have an expiry download period of 20 days, causing many difficulties for students who want to review the lecture in the future. Lecturers are advised to create class groups on social networks such as Messenger, Zalo, Viber, etc. or backup lecture videos to Google Drive so that students can review them when needed.

In order to stimulate creative thinking in learning, help students understand the lesson content, and create learning motivation for students, lecturers should strengthen inferential questions related to the lesson and add bonus points for students with the best and correct answers.

Lecturers are suggested to strengthen the form of mini exercises, critical exercises, and division of work in groups during the lesson so that students have the opportunity to interact, learn from each other, and avoid monotony in the learning process at home. Moreover, it is important for lecturers to consider the amount of homework assigned to students after school. Because at the same time they have to accept many sudden changes in both study and life, students cannot adapt at first. The fact that lecturers assigned too much homework also partly affects the psychology of students during the urgent online learning process due to the qualitative data.

Accessibility is not just about having an Internet connection or computer, home conditions also affect concentration levels and access to educational tools. Flexibility, tolerance, and communication should be common elements in online classes. Due to the urgent situation, many lecturers had to use new tools without equipping the students. For similar experiences in the future, lecturers can use new tools whenever they have made sure their students feel confident enough in their ability to successfully use those tools.

Because the learning conditions of each student are different, especially those who live in noisy conditions or whose families have many brothers and sisters participating in online learning simultaneously, being distracted while studying and having problems related to network transmission are inevitable. Lecturers should support their students to switch classes to equivalent classes (being taught by the same lecturers in that semester) with the same progress.

There are suggestions especially for students:

- Every student needs to actively learn the output requirements of each module, thereby making a specific and suitable study plan for themselves to achieve the best results.
- Students are required to raise a sense of learning, read documents in advance and learn related knowledge before each class to improve learning efficiency. Students also have to actively interact and express opinions with lecturers and friends during each lesson, and contribute to the construction of the lesson.
- During the learning process, if students encounter any difficulties, they need to actively contact the lecturers, the academic advisor, and the technical support department to receive advice and support. In addition, students also need to voluntarily learn how to use and fix common problems when using technology platforms for online learning.

REFERENCES

Abdullah, F., & Ward, R. (2016). *Developing a General Extended Technology Acceptance Model for E-Learning (GETAMEL) by analysing commonly used external factors*. *56*, 238-256. DOI:10.1016/j.chb.2015.11.036.

Albelbisi, N., & Yusop, F. (2019). Factors influencing learners' self –regulated learning skills in a massive open online course (MOOC) environment. *Turkish Online Journal of Distance Education*, 20, 1–16. 10.17718/tojde.598191.

Alghamdi, A., Karpinski, A. C., Lepp, A., & Barkley, J. (2020). Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self- efficacy for self-regulated learning and gender. *Computers in Human Behavior*, 102, 214–222.

Andreas, S. (2020). *The Impact of COVID-19 on Education – Insights from Education at a Glance 2020*.

Andrew K., Edward J. P., and Peter S. (2019). *A taxonomy of factors affecting attitudes towards educational technologies for use with technology acceptance model, British Journal of Educational Technology*. DOI:10.1111/bjet.12833

Bali, S., & Liu, M. C. (2018). Students' perceptions toward online learning and face-to-face learning courses. *Journal of Physics: Conference Series*, 1108, 12094.10.1088/1742-6596/1108/1/012094.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Inquiry*, 84(2), 191–215. https://doi.org/10.1037//0033-295X.84.2.191

Bower, M. (2019). Technology-mediated learning theory. *British Journal Education Technology*, 50, 1035–1048. 10.1111/bjet.12771.

Chau, P. Y. K. (2001). Influence of computer attitude and self-efficacy on IT usage behavior. *Journal of End User Computing*, 13(1), 26–33. https://doi.org/10.4018/joeuc.2001010103

Cheng, Y. M. (2011). Antecedents and consequences of e-learning acceptance. *Information Systems Journal*, 21(3), 269–299. https://doi.org/10.1111/j.1365-2575.2010.00356.x

Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 1–6. Springers.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use com- puters in the workplace. *Journal of Applied Social Psychology*, 22(14), 1111–1132. https://doi. org/10.1111/j.1559-1816.1992.tb00945.x

Elizabeth, A. M., Kim, R. W., Barbara, Y. & Shannon, S. B. (2020). *COVID-19 and Distance Learning: Effects on Georgia State University School of Public Health Students*.

Fishbein, M. A., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*.

Gina, I. B., Valentin, N., Alexandru, A. & Geanina, B. (2021). *The Effectiveness of Online Education during Covid 19 Pandemic – A Comparative Analysis between the Perceptions of Academic Students and High School Students from Romania*.

Heckel, C., & Ringeisen, T. (2019). Pride and anxiety in online learning environments: Achievement emotions as mediators between learners' characteristics and learning outcomes. *Journal of Computer Assisted Learning*, 35, 667–677. 10.1111/jcal.12367.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EDUCAUSE Review*.

Huang, H. M., & Liaw, S. S. (2018). An analysis of learners' intentions toward virtual reality learning based on constructivist and technology acceptance approaches. *International Review of Research in Open and Distance Learning*, 19(1), 91–115. https://doi.org/10.19173/irrodl.v19i1.2503

ILO (International Labour Office). 2020. *Skills development in the time of COVID-19: Taking stock of the initial responses in technical and vocational education and training*.

John, D. (2020). Coronavirus (COVID-19) and Online Learning in Higher Institutions of Education: A Survey of Perceptions of Ghanaian International Students in China. *Online Journal of Communication and Media Technologies, 10* (3), e202018.

Kemp, A., Palmer, E., & Strelan, P. (2019). A taxonomy of factors affecting attitudes towards educational technologies for use with technology acceptance models. *British Journal Education Technology*, 50, 2394–2413. 10.1111/bjet.12833.

Lee, B. C., Yoon, J. O., & Lee, I. (2009). Learners' acceptance of e-learning in South Korea: Theories and results. *Computers and Education*, 53(4), 1320–1329. https://doi.org/10.1016/j.compedu.2009.06.014

Lee, D. Y., & Lehto, M. R. (2013). User acceptance of YouTube for procedural learning: An extension of the Technology Acceptance Model. *Computers and Education*, 61(1), 193–208. https://doi.org/10.1016/j. compedu.2012.10.001

Liaw, S. S., & Huang, H. M. (2011). A study of investigating learners' attitudes toward e-learning. *Proceedings of the 5th International Conference on Distance Learning and Education 2011*, 12, pp. 28-32).

Lin, H.F. (2011). An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust. *International Journal of Information Management*, 201106.

Linh, P. D., & Trang, T. N. (2020). Pandemic, social distancing, and social work education: students' satisfaction with online education in Vietnam. *Social Work Education*, 39(8), 1074-1083. DOI: 10.1080/02615479.2020.1823365

Liu, S. H., Liao, S. H., & Pratt, J. A. (2009). Impact of media richness and flow on e-learning technology acceptance**,** *Computers and Education*, *52* (3), 599-607. DOI:10.1016/j.compedu.2008.11.002

Lopez, L., & Lopez, J. M. (2011). The role of attitudes in the TAM: A theoretically unnecessary construct. *MDPI*, *42* (6).

Martinez-Torres, R., Toral, S. L., Feredico, B., & Sergio, G. (2008). A technological acceptance of e-learning tools used in practical and laboratory teaching, according to the European higher education area. *Behaviour & Information Technology*, *27*, 495-505. DOI: 10.1080/01449290600958965

Mazhar, F., Rizwan, M., Fiaz, U., Ishrat, S., Razzaq, M. S., and Khan, T. N. (2014). An investigation of factors affecting usage and adoption of Internet & mobile banking in Pakistan. *International Journal of Accounting and Financial Reporting*, 4(2), 478-501.

Murphy, M. P. A. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*. 10.1080/13523260.2020.1761749.

Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning. *Educational Technology & Society*, *12*(3), 150-162.

Rhema, A., & Miliszewska, I. (2014). Analysis of student attitudes towards e-learning: The case of engineering students in Libya. *Issues in Informing Science and Information Technology*, 11, 169-190.

Saade, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: An extension of the technology acceptance model. *Information and Management*, 42(2), 317–327. https://doi.org/10.1016/j.im.2003.12.013

Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication, 42*, 73-93.

Sun, J. C. Y., Lin, C. T., & Chou, C. (2018). Applying learning analytics to explore the effects of motivation on online students' reading behavioral patterns. *International Review of Research in Open and Distributed Learning*, 19(2).

Teo, T. (2009). Modeling technology acceptance in education: A study of pre-service lecturers. *Computers and Education, 52*(2), 302-312.

Teo, T., Milutinović, V., Zhou, M., & Banković, D. (2017). Traditional vs. innovative uses of

computers among mathematics pre-service lecturers in Serbia. *Interactive Learning Environments*, 25(7), 811–827. https://doi.org/10.1080/10494820.2016.1189943

Tichavsky, L. P., Hunt, A., Driscoll, A., & Jicha, K. (2015). It's just nice having a real lecturer": Student perceptions of online versus face-to-face instruction. *International Journal for the Scholarship of Teaching and Learning*, 9(2). 10.20429/ijsotl.2015.090202.

Tsang, M. M., Ho, Sh. C. & Liang, T. P. (2004). Consumer Attitudes toward Mobile Advertising: An Empirical Study. *International Journal of Electronic Commerce*, 8(3), 65-78

Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29, 271–360. https://doi.org/10.1016/S0065-2601(08)60019-2

Yadegaridehkordi, E., Shuib, L., Nilashi, M., & Asadi, S. (2019). Decision to adopt online collaborative learning tools in higher education: A case of top Malaysian universities. *Education and Information Technologies*, 24(1), 79–102. https://doi.org/10.1007/s10639-018-9761-z

Yueh, H. P., Huang, J. Y., Chueh, C. (2015). Exploring factors affecting students' continued Wiki use for individual and collaborative learning: An extended UTAUT perspective. Australasian Journal of Educational Technology, 31(1), 16-31. DOI:10.14742/ajet.170