Online assessment at higher education in COVID-19 Era

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ABSTRACT: *Since late April 2021, Vietnam has experienced the 4th outbreak of COVID-19. It was also the time to end the second semester of the school year at colleges and universities in Vietnam. To curb the pandemic, the Vietnam government has implemented many strict measures in public places, such as social distancing, quarantine processes, and embracing hygiene and sanitation throughout the country. As a result, almost all schools were closed, and both teachers and students had to work from home. This qualitative study sought to examine the lecturer's experiences of online assessment at a regional university. Information was gathered by conducting multiple interviews via the Zalo application with 20 lecturers at the University of Foreign Language Studies. An analysis of the results of this study found the most preferred assessment methods to be written assignments, multiple-choice tests, quizzes, presentations, and oral examinations. In addition, Zoom and Microsoft Teams are believed to be the most popular testing environments. Through this study, many challenges of online assessment have been unveiled, such as cheating, teacher's workload, and testing process problems.*

KEYWORDS: **Higher education, online assessment, COVID-19 era.**

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1. Introduction

The studied university is situated in the central region of Vietnam. It has a mission to train the language skills and labour force for the central and highland provinces (Phuc, 2021). Moreover, this place is a central hub of tourist attractions in the country, so it is well-known throughout Vietnam and all over the world. This is a reason why this city has been heavily affected by COVID-19 as a consequence of local and international tourism.

COVID-19 has been considered as one of the most devastating and highly infectious pandemics in human history as the fatality rate is almost 3% (Rehman et al., 2021). Since it started in Wuhan City, China, in late 2019, it has affected a large number of people worldwide (Remuzzi & Remuzzi, 2020). It is confirmed that there are 260.6 million COVID-19 cases and 5.2 million deaths globally (Pettersson et al., 2021). So as to prevent the spread of the disease, governments have implemented strict policies in public places such as social distancing, quarantine processes, and embracing hygiene and sanitation (Khachfe et al., 2020). Consequently many colleges, and universities were closed to control the disease; thus learning and teaching online is the only option available for schools to choose (Martinez, 2020). Vietnam was no exception. The Ministry of Education has instructed educational institutions throughout the country to stop providing face-to-face teaching. In order to continue teaching and learning, universities have switched to online classes (Anh, 2020). The study was conducted at the Faculty of English for Specific Purposes at a local university in Vietnam with 20 lecturers who were asked about their experiences in online testing during the COVID pandemic. The research findings provide one picture of how teachers and schools deal with a new way of assessment during the COVID-19 period, with an indefinite time frame to come back to normal.

2. Literature review

Since the outbreak of COVID-19 in December 2019, thousands of schools have experienced closures, and they have taken many measures to curb the disease. Each school had its own way of dealing with COVID-19 and carried out their work in different ways. As a consequence, teaching and learning have been turned into an online mode (Ahmed et al., 2021). Teaching, testing, and assessment have also been carried

out by the online method to prevent the spread of the disease and protect the students' and teachers' health (Anh, 2021).

When using online assessment, much depends on the use and availability of modern means of communication, including computers, computer networks, multimedia, audio-visual aids, and online e-libraries (Meletiou, Voyiatzis, Stavroulaki, & Sgouropoulou, 2012). Changes in teaching and learning involve modifying curriculum preparation, lesson plans, the learning process, and student assessment (Ahmed et al., 2021). Online exams have caused many difficulties for teachers and students because of the differences between paper and online examinations (Gehringer, 2010).

Online exams have been proven to be beneficial to teachers and students. This method of testing can give results much more quickly, so learners do not have to wait for a long time compared to the paper-based one. In addition, teachers are overloaded with learner assessment. Many students are in favour of this type of exam, and they think that an e-exam is more objective and high-standard (Thomas et al., 2002). However, online assessment cannot avoid some negatives and challenges when it is put to use. It also has some drawbacks, such as interoperability, facilities, testing security, and technical skills (Ahmed et al., 2021).

Online exams can be divided into three main types: diagnostic, formative, and summative tests. At present, these types of testing are widely used in universities and colleges as tools to assess learners' learning outcomes (Yong-Sheng, Xiu-Mei, & Ai-Qin, 2015). In addition, multiple-choice, sequencing, matching, true or false, fill-in-the-blank, and identification were most preferred by teachers (Torshiz, Esfaji & Amintoosi, 2020).

A large number of studies have revealed that cheating and deception are common problems in online exams. In a study, Jennifer Peterson said that students tend to cheat on online exams. This issue is getting more and more serious with the help of modern technology (Peterson, 2019). In online assessments, students do not have much commitment to the integrity of their learning. As a result, they feel comfortable with technology and cheating (Rowe, 2004). In their paper, 75% of university students admitted that they had cheated sometimes in their learning, even though they knew well about the academic integrity at their schools (Dick et al., 2003). Online testing cannot require students to sit down and do the test like the conventional ones as the quality of the students' work is questionable (Tiong & Lee, 2021).

To protect academic integrity, educational institutions have implemented many protective measures. Diedenhofen and Musch (2017) informed us that software was used to check students' paradigms in a large number of universities, and it has proved to be effective (Diedenhofen & Musch, 2017). Students may resort to cheating if organizations do not apply strict rules to their exams (Maggioni & Rossignoli, 2020). Artificial intelligence (AI) techniques via the internet protocol (IP) network detector and deep learning-based behaviour detection agent have been utilized in online exams in order to deter cheating (Tiong & Lee, 2021).

Remote assessments are varied and can be divided into two main types: remotely proctored exams (time-constrained) and open-ended assessments (Guangul et al., 2020). A proctored exam is conducted by using webcams to track and oversee students during the exam period. This device also helps instructors track students' activities if there is any suspicious action (Rutgers, 2021). Many alternatives are applied instead of proctored assessments, such as a series of quizzes, open book and take-home assessments, fact sheets, or e-portfolios (Guangul et al., 2020).

In recent years, a new learning culture has been noticed by many scholars as well as educators. It is rooted in social constructivism, and the students play an active role in their learning. In addition, students are the ones who share responsibility for the learning process, practice self-assessment and reflection, and cooperate with the teacher and other students (Birenbaum et al., 2006). Technology is considered a crucial part of e-learning assessment (Anderson & Dron, 2011). According to the new culture of learning, information technology is considered

as the basis of online assessment, and the learner takes the central role in his learning process. Moreover, new knowledge cannot be separated from previous experiences, social discussions, validation, and application in real world contexts. In other words, language and other learning tools are important for constructing knowledge (Tinoca et al., 2014).

3. Methodology

This qualitative research is shaped and formed by the new learning culture theory designed by Luís Tinoca (2014). This theory affirms that ICT mediation is the cornerstone of online assessment, and it is constructed by fundamental collaboration, multiple perspectives, and learners as the center of the process (Tinoca et al., 2014). According to this theory, assessment should be looked at from different perspectives and it needs cooperation between teachers and learners.

In this study, data were collected using semi-structured interviews. Multiple interviews were held with each lecturer via the Zalo application. The interviews were carried out informal conversations among colleagues at the same workplace. At the start of interviews, the researcher spent time on introductions and informally chatting to establish rapport and put participants at ease. Participants were reminded of the purpose of the study and that details of interviews would be kept confidential. Cameron (2005) suggests starting interviews with 'free narratives' (p. 601) to help put participants at ease (Cameron, 2005).

3.1. Research question

The research question underpinning this study is "What challenges do lecturers experience with online examinations in higher education?"

3.2. Recruitment of participants

After getting consent from the head of department and school, the author contacted the lecturers working in the Faculty of English for Specific Purposes. Then information about the purpose of the research and the confidentiality of participants was sent out via the provided email address. The information about the research was provided to potential participants in Vietnamese to make sure they fully understood. After understanding the research, the researcher randomly picked 20 voluntary lectures as participants, including 05 males and 15 females. Six of them hold doctorates, while the remaining 14 are masters with at least 05 years of teaching experience. All participants were volunteers, and they had to sign a consent form before taking part in the study. Participants were informed that they could stop and leave the study whenever they wanted.

3.3. Data analysis

The interviews with teachers were recorded as audio files and then transcribed. Separate case studies were constructed by triangulating the data from the interviews. Member checking and peer debriefing were used to check the results' validity and credibility.

Member checking was used to ensure the credibility of interview data, the researcher's interpretation of it, and the findings generated from it. Interpretations and findings were checked with study participants to see if they reflected their experiences and viewpoints. Stuhlmiller (1996) states that "One way to ensure the validity or truth of an accurate account is to have it verified by the [participants] themselves". They must recognize the interpretation as matching their own (p.38). In a way similar to member checking, peer debriefing (Braithwaite, Moore, & Abetz, 2014) helps improve research credibility and detect problems that the researcher might have missed. Through peer briefing, colleagues can help researchers uncover issues like unclear descriptions, overemphasized or underemphasized points, bias assumptions or perspectives, or general errors in the data, processes, or other parts of the study (Braithwaite et al., 2014).

4. Results

After analysing the data collected from various interviews with participants, the information was coded into themes. The identified themes are preferred assessment methods, platforms, and online assessment challenges. Some direct quotes from teacher participants are used to

illustrate each category.

4.1. Preferred assessment methods

Methods for online assessment are varied and available in many different environments for teachers and organizations to choose from. Most of the participants said that online assessment helps students become more active and effective in their learning. This merit of the online exam was confirmed by Lan.

"I think e-exams are beneficial to students. They also become more active and responsible in their work. When I give them any task to work on, they tend to finish it before the deadline and with better quality. Many of them show their creativity and imagination in wonderful ways".

It also encourages students to be more creative and responsible in their learning. One participant, Nga, highlighted the method of assessment was chosen based on the subjects, levels, and class size in her conversation with the author.

"Depending on the level and size of the class, I would create a type of test or task for my students to complete. For example, I often choose multiple choice for elementary groups, while at the higher level, I will choose assignments. Testing machines seem to be very effective and time-saving with the large number of students in a class".

There are a variety of online assessment methods, but teachers at the University of Foreign Language Studies chose only four common types. Tthey favoured were essay writing, open-ended questions, quizzes, and presentations. The reason for this is objective and subjective. The researcher discovered, through data collection, that the greatest burden for teachers to use other methods is a lack of time and technical skills. The participants admitted that it took time to learn how to use and get familiar with the new testing system. In addition, they had a workload with teaching and their daily lives.

Essays/Written Assessments/Projects

Most of the Participants preferred essays and project. They asserted that this kind of work encourages students to optimize their creativity and imagination. They also proved that written assignments such as blogs or discussion posts could promote students' collaborative and communication skills. Hoang, one of the teacher participants, shared his experience with the researcher.

"I prefer to use written essays for middle term exams as it is convenient and effective. I can see how creative my students are when I read their essays. To be honest, I have to admit that in some fields, my students have a better and deeper view than I can".

"Through doing written assessments, blogs or discussion posts, my students are rounded in terms of collaboration and communication".

A number of teachers admitted that students could have at least one opportunity to receive action-focused formative feedback from their lecturer on their work through the writing process. Nga, one of the participants, also added that students are eager to receive their teachers' comments on their work to know their strengths and weaknesses to improve in the next one.

"My students were very happy when they received my feedback on their papers. I can see that they took my comments and advice carefully and they made much improvement in their following tasks".

Open-Ended/Essay Questions

Open-ended and essay questions are preferred by teachers at the university because most teacher participants believe that this kind of test can give room for students to wonder, explore, discover, and reflect on a certain issue in their lives. Through this process, students can acquire increasingly complex knowledge and sophisticated thinking skills. The open-ended questions are powerful as they tend to tap into that natural cycle and invite learners to pursue their own curiosity about the issue they are interested in.

Open-ended questions also prove to students that they get the trust of their teachers. It also provides students with opportunities to show their ideas, think for themselves, and contribute to the class activities. Through this type of question, students can have a sense of belonging, competence, and autonomy in the class. Thao added that open-ended questions can allow students to think critically and express that critical thinking through their writing, which

conveys an intense level of understanding about the topic.

"I choose open-ended questions for my students as I believe my students' creative ability and critical thinking are shown in their writing. I am fascinated by many of my students' ideas on certain issues. I have to admit that in some fields, my students have a deeper understanding than I can do".

Online Test/quiz/exam

Multiple choice questions are chosen by lecturers for their mid-term tests and end-of-course tests. A majority of teachers said that this type of test has many benefits, such as being easy to create, easy to apply on a large scale, and covering a broad range of subject areas. It is believed that plagiarism affects results that can be minimized. This is illustrated by Huong's interview.

"It is easy to use and create for every class and level. As you know, working as a lecturer is very busy, and lesson planning takes most of my time. Using multiple-choice questions for my students is not only time-saving, but it also reduces the chance of plagiarism".

However, some teachers confirmed that multiple choice questions have some unavoidable negatives, such as limited feedback, biased results, and time-consuming. It is confirmed that teachers need a lot of time and skills to construct multiple-choice questions for their classes. Moreover, this type of question is only suitable for elementary or pre-intermediate students; it seems to be less effective at the higher levels. A large number of teachers stated that measuring a student's ability to organize and express ideas is not possible via multiple choice.

Presentation

Presentation is one of the most popular activities among lecturers at the University of Foreign Language Studies. Most teachers said they used this kind of test for group presentations on midterm tests, and some applied this type of task to their topic's final test. They also confirmed by Nam, a participant, this kind of work could engage students in their learning and it is a good way for them to share their work and knowledge.

"I prefer this kind of test to the others as it can involve my students in their work. In addition, it also gives students chances to learn from each other".

This type of test is chosen because it is thought to give students more time to delve deeply into their knowledge in the field in which they work. It also provides students with valuable opportunities to practice their presentation skills and critical thinking in a non-threatening environment. In addition, Ha asserted that presentations could offer students opportunities to enhance their skills in using audio-visual and information and communication technologies.

"Through presentation, I can see that my students can show their insight in their work as they devoted much time to their work. I am fascinated by their presentation and communication skills when they give a presentation to the class. Their skills in using technology are very impressive as well".

However, teachers also highlighted some unavoidable negatives, such as time-consuming, sensitive topics, considerable effort, and difficulties in getting students involved in the presentation. Nga shared her experience with her teaching.

"It often takes me a long time to think about the topics for students to present as well as for them to present their ideas in class. Some students are too shy and it is not easy to get them to participate in the presentation".

4.2. Preferred assessment platform

There are many online assessment platforms for teachers to choose from both free and paid for. However, lecturers at this university chose Zoom, Microsoft Teams, and Moodle. Zoom is the first choice as it is considered user-friendly and it can give high-quality images. Thus, students can be motivated for their exams.

Microsoft Teams is preferred by a large number of lectures because it is much more powerful than the others, and Hang, a participant, also admitted that it is quite sophisticated to use. So as to know how to use it, users need to spend time learning before putting it into use.

"Microsoft Teams is really powerful; I can do almost everything on it from organizing homework to assignments for students. It is also

one of the safest platforms for teaching and learning online. However, it is not easy to use for new users. You need time to learn how to use it. It takes time."

In addition, teacher participants said that they chose Microsoft Teams because the school has a good infrastructure to support this environment for both teachers and students. Moreover, they were well supported by the technical teams at school. As a consequence, they felt much more confident in using this platform for their online assessment.

The second platform in the lecturers' preference is Zoom. The participants unveiled that this platform is free of charge and user-friendly. It is preferred by lecturers for oral presentations and exams. They all agreed that this environment is ideal for video exams because it can convey high-quality pictures without requiring much machine capacity.

Moodle is another choice for lecturers at the University of Foreign Language Studies, the University of Da Nang. Many people trust, is as teachers can plan their examinations and manage their time effectively via this platform. Furthermore, it is helpful in student evaluation and management of students' performance in their work.

4.3. Online assessment challenges

All interviewed participants admitted that shifting from conventional exams to online ones put them in many challenging situations, and they sometimes lost motivation and energy in their work. One of the participants, Phuong, shared her feelings with us.

"I find online assessment very challenging as I was not prepared or trained at the university. Now there are COVID-19 outbreaks, and we are all passive in this situation. We cannot stop time, and the students need to finish their course, so we have to adapt to online assessment".

The interviews uncovered that lecturers encountered many difficulties related to the process, such as cheating or internet interruption. Many teacher participants agreed that they could see the anomalies in the students' exam results. Some students who had had moderate learning outcomes in the traditional exam showed a boost in their online examination. Moreover, they could see the abnormal ways of expressing ideas by some students. After conducting investigations, Huong discovered that many students had someone else take the exam instead of answering the question themselves. In addition, some students did not turn on their laptops' cameras and explained that their machines had problems with micro or cameras. Furthermore, a large number of the lecturer participants thought that the evaluation results did not reflect the truth. It is harder to detect cheating in online exams than in conventional examinations (Watson & Sottile, 2010).

"My students are very tricky; they did not turn on their cameras when I required them to. They said their camera had a problem. I could do nothing with that, even though I knew they were telling a lie. When I marked their work, I knew that they had someone to do it but I could not do anything because I had no evidence".

Another problem with online exams is plagiarism. Most of the participants claimed that their students tend to copy others' work and paste it on their paper in their assignments. Nha admitted that this is a difficult problem because teachers do not have plagiarism detection software. As a consequence, teachers had to ignore this issue when marking their students' papers.

It is said that the time given for exams and assignments was much longer than the maximum time given in face-to-face education. This also caused many difficulties for lecturers in holding online exams. In addition, they admitted that it took a long time for them to prepare questions for the online platform. The rate of plagiarism is high, and it is difficult to monitor the students' progress in their learning.

4.4. Suggestions for online assessment improvement

The following recommendations are based on analyzing of the four case studies, the interview data, and a review of the related research literature. In order to be able to implement the following recommendations, teachers will need further professional training and development, there will need policy changes, and there may need to be

changes to teacher workloads. Teachers would also need to be willing to change their testing practices, and equipment and facilities would need to be acquired to enable the online testing of a wider range of practical and technical skills.

(i) Suggestion for minimizing the chances of cheating

So as to minimize the students' opportunities to cheat on the online exams, lecturers should use timed or open-book tests. In addition, response tests such as multiple choice or T/F questions should be replaced by short-answer questions or essay questions that require students to apply their knowledge to a new context. Shuffled or randomized questions prove that cheating can be reduced as students cannot copy their answers or help each other on their exams.

It is recommended that plagiarism detection software be used in online exams. There are many free-of-charge plagiarism detection platforms available for teachers and schools to use, such as SafeAssign or Turnitin. These services can deter the potential for cutting and pasting in the students' work. As a consequence, students would know how to properly cite and quote other people's work.

Frequent low-stakes tests and performance assessments are beneficial to online exams. Students find it difficult to cheat on short quizzes or self-check activities. Moreover, performance assessment requires much writing and speaking from students. It is a continuous process, so it is not easy for cheating to occur.

Proctoring exams are an ideal alternative to face-to-face exams. Students' computers, cameras, and audio are monitored by proctoring software. The data, which is recorded by proctoring software, is sent to the exam management for review. Through proctored software, any suspicious behaviour would be noticed and could be stopped immediately to ensure the exam is free of cheating.

(ii) Suggestion for more student-to-student interactions

When learning online for a long time, students feel bored and isolated from others. To improve students' moods and learning outcomes, lecturers should assign peer review or group projects. Peer review can offer students opportunities to motivate each other in their learning and learn from each other. In other words, teachers can grade students' work based on their peer reviews.

Group projects can test the students' knowledge of the course content and their teamwork skills. To put it another way, this type of test can check not only a student's knowledge of their course, but also their cooperative and communication skills.

(iii) Suggestion for performance assessments

So as to effectively assess students' performance, both software and hardware are needed to be equipped for schools and teachers. Institutions can seek support from software companies like Microsoft or Google, which have special support packages for schools in Vietnam. In addition, schools should give a hand to students and teachers who are having difficulties with low-cost devices such as webcams and microphones. In the market these days, there are many kinds of affordable or free software available for teachers and learners to use, such as Jing, Scremmcast-o-matic, or online platforms like Educreations. As a consequence, the quality of the test would be much better, and the outcome of the test could be improved.

(iv) Suggestion for more visually rich and interactive materials

So as to improve students' moods and comfort during their exams, online examinations should incorporate rich and relevant multimedia wherever it is possible. The interactive multimedia assessments, such as drag and drop activities, image-based activities, and audio-based activities.

Drag and drop activities are considered as an effective method of testing. It requires students to categorize or order the concepts visually, which multiple-choice quizzes cannot do. This activity replaces out-of-date testing forms such as global multiple-choice or quizzes.

Image and audio-based testing also get the attention of teachers and examiners as they can improve the reliability and credibility of the e-exams. In this type of exam, students must record their answers for assessment. By doing this, students would find it hard to treat their

exams.

(v) Suggestions for reducing workload for teachers

Designing and administering online examinations is tiring and time-consuming. Both teachers and students cannot go to class as usual, so verbal feedback is not easy or natural. Most online exam feedback is given in written form via a platform or class discussion boards. As a result, it often takes a long time and both sides have to rely on technology. In order to reduce the burden for teachers, group projects, peer-reviewed activities, student-led discussions, or representative submissions are the most effective and helpful choices.

5. Conclusions

The current study examined the lecturers experiences at a local university during COVID-19. The study found that participants mainly used tools and environments available on the market, such as Microsoft Teams, Zoom, and Moodle, instead of developing one for themselves. These platforms have proved to users that they are friendly and multifunctional. In addition, they found that no platform that met their expectations regarding the assessment process, even though they listed many advantages of the platforms they used for their work. A number of difficulties have been unveiled in online exams conducted at this institution. The biggest ones identified by teachers are technical issues such as cheating, testing, and teacher workload. Online assessment does not get enough trust from lecturers.

The study has several limitations due to time constraints and the lockdown of the country. It was carried out with a small number of participants, and it would be much more reliable and reflect reality if the number of participants was bigger. In addition, the interviews were the intersection ones, and the author knew that the lengthy interviews would be much better.

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