

ONLINE EXAMINATION DURING THE COVID-19 PANDEMIC: LEARNERS' PERSPECTIVES

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ARTICLE INFO		ABSTRACT
Received:	15/3/2022	This study aims at exploring the acceptance of online examinations on the part of English-majored students of the School of Foreign Languages, Thai Nguyen University (SFL-TNU) during the spread of the Covid-19 pandemic. An online questionnaire survey of 110 English-majored students elicited their perceptions of the usefulness of online examinations in terms of pedagogy, validity, reliability, affective factors, practicality and security. The results show that online exams were perceived to have significant benefits over traditional, paper-based exams, including appropriateness; stress and anxiety reduction; reliability of scoring; long-term efficiency in time, effort, travelling and costs; and security. Conversely, participants identified many challenges facing the successful implementation of online exams regarding immediate feedback, cheating and plagiarism issues. The findings also indicate that the successful implementation of online exams can be achieved by providing more detailed and immediate feedback, ensuring security and designing the banks of validated questions. Besides, it is also very necessary for the institutions to provide support for the students during the process of implementing online exams.
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THI TRỰC TUYẾN TRONG GIAI ĐOẠN ĐẠI DỊCH COVID: NHÌN TỪ GÓC ĐỘ NGƯỜI HỌC

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THÔNG TIN BÀI BÁO		TÓM TẮT
Ngày nhận bài:	15/3/2022	Nghiên cứu được tiến hành với mục đích điều tra quan điểm, thái độ của người học về việc áp dụng hình thức thi trực tuyến đối với sinh viên chuyên Anh trường Ngoại ngữ - Đại học Thái Nguyên trong giai đoạn bùng phát dịch bệnh Covid-19. Nghiên cứu sử dụng một bảng câu hỏi trực tuyến khảo sát cho 110 sinh viên trường Ngoại ngữ nhằm đưa ra quan điểm nhận thức của họ về tính hữu ích của hình thức thi trực tuyến về các mặt: tính sư phạm, độ chuẩn xác, độ tin cậy, yếu tố cảm xúc, tính thực tế, và tính bảo mật. Kết quả nghiên cứu cho thấy, các bài thi trực tuyến có lợi thế lớn so với bài thi giấy truyền thống về sự phù hợp, giảm căng thẳng, lo lắng thi cử, độ chính xác về chấm điểm, giảm thời gian, công sức, di chuyển, chi phí, và có tính bảo mật cao. Mặt khác, việc triển khai sử dụng bài thi trực tuyến cũng đối mặt với một số vấn đề liên quan đến việc đưa ra phản hồi tức thời, gian lận và đạo văn. Kết quả nghiên cứu cũng chỉ ra rằng, bài thi trực tuyến có thể được triển khai thành công bằng việc cung cấp phản hồi tức thời, chi tiết; đảm bảo tính bảo mật, và thiết kế ngân hàng câu hỏi có độ chuẩn xác cao. Bên cạnh đó, việc cung cấp những sự trợ giúp cho người học trong việc triển khai đánh giá trực tuyến cũng rất cần thiết.
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1. Introduction

The increasing development of e-learning in all its form in the last decades has placed a lot of challenges to many educational institutions in terms of students' assessment. Especially, during the period of the Covid-19 pandemic, the significance of technology for learning and teaching in general and for online assessment in particular has increased dramatically. As a result, online examinations are being increasingly implemented in many educational institutions as a means of supplementing or even replacing paper-based tests [1]. Online examinations, commonly known as electronic examinations and previously as computer-based assessments, can be defined as "a system that involves the conduct of examinations through the web or the intranet" [2, p.126]. The exam activity module allows the teacher to design and set exams consisting of a variety of question types including multiple choice, true-false, gap-filling, short answer, and essay questions. These are kept in a question bank and can be reused in multiple exams in any place and at any time. Online examination systems, therefore, enable the simplification of the traditional paper-based examination process especially when class sizes are large, from designing and delivering the exam to marking, reporting, storing the results and conducting statistical analysis [3], [4].

Although there is a body of research highlighting a number of key benefits of online examinations, as well as some notable challenges from the perspectives of both teachers and students [1], [5], [6], none has been observed during a two-year period of the Covid-19 pandemic in Vietnam. Especially, even though online examinations are increasingly being implemented in many educational institutions in Thai Nguyen University, learners' perspectives on their use remain unexplored. Therefore, the main aim of this study is to examine the online examination practices at the School of Foreign Languages, Thai Nguyen University from the perspective of learners who have experience of such exams for two semesters in the school year 2021-2022. Its findings will help the university to identify important and strategic aspects of the effective design and setting of online exams to support the current situation of learning and teaching. Therefore, this study addresses the following research questions:

- What are the perceptions of learners regarding the usefulness of online examinations in terms of pedagogy, validity, reliability, affective factors, practicality and security?
- What are the essential considerations needed for the successful implementation of online examinations at the School of Foreign Languages, Thai Nguyen University?

1.1. Literature Review on Online Examination

It has been said that technology has brought the globe in a room and made functioning easy and faster. Similarly, e-assessment has made assessment developed, accurate and faster compared to traditional time-taking paper-based measures. A significant body of literature reports the advantages of e-assessment in general and online examinations in particular [1], [5].

The pedagogical advantage of online examination most frequently cited in the literature is immediate feedback [5], [7], [8]. Dreher et al. (2011) found that giving learners meaningful feedback on their progress, their strengths requiring improvement empowered them to take the necessary action to improve their learning performance. Hodgson and Pang (2012) surveyed 104 students taking a statistics course at Hong Kong University and reported that participants were very satisfied with the timely feedback provided when they answered multiple choice questions (MCQs). Such feedback has the potential to engage students in reflection and to take greater ownership of their learning, thus contributing to a change in their learning approach [8].

Another benefit of online exams is reliability. For educators it is very important for marking to be reliable, particularly for large classes [9]. Dermo (2009) stated that technological tools can be used to mark online exams more accurately than paper-based ones. As a consequence, online exams give them the confidence that the marking will be transparent because the results are generated instantly. However, it must be acknowledged that such systems are feasible only for multiple choice questions, gap-filling, matching or short-answer questions [4].

The validity of online exams is a crucial issue. The incorporation of multimedia elements, including video or audio material, scenarios, Internet links and simulations, is made possible by the use of online exams to measure students' knowledge of any given topic [10]. There has been a controversy on the validity of online examinations. Some researchers note that online exams are limited to closed-question formats which tend to promote memorisation and factual recall and are unsuitable for the assessment of cognitive skills, namely analytical, creative and constructive skills [8], [11]. Others, however, maintain that this depends on how the exams are constructed and that they can indeed be used to evaluate learning at higher cognitive levels [12], [13].

Regarding the practicality of online examinations, many researchers have argued that the main challenges facing e-exams are related to the time and skills required to construct high-quality objective assessment tools [10], [14]. For example, in their study, Kuikka et al. (2014) revealed one of the main challenges teachers might face when introducing online exams was that they found resistance to change, whereby teachers were unwilling to change their examination habits, and conclude that good support and training would be helpful in overcoming this obstacle.

Concerning online examination security, several authors have also shed light on the need for security in online exams and have proposed various techniques for enhancing it [15]. For example, Anusha et al. (2012) raised the issue of exam candidates cheating by communicating with other students or by browsing the Internet. The authors propose that webcams should be used to monitor examinees and suggest the use of weblock software, whereby only the online exam materials are displayed on the screen, while the browser and other applications are locked throughout the exam, thus disabling features such as screen capture, copy and paste, right-click menu options, browser menus, toolbar options and function keys.

1.2. Online examination practices at SFL-TNU

There is a fact that a significant number of educational institutions in Vietnam have recently implemented online exams due to the Covid-19 pandemic. Among these, SFL-TNU has begun using online examinations since the second semester of the school year 2020-2021. The online examinations have been opened for all learning courses on which a large number of students are registered. The written exams were conducted online via Testmoz – an automatically graded test platform. During the examining time, Zoom or Google Meets were the platforms of choice to monitor the candidates constantly. The whole invigilation process commencing from briefing till the end of the exam was recorded and observed by one staff member from the Department of Testing and Quality Assurance.

While sitting for the exams, students were required to procure two devices, preferably a laptop and a smartphone. The purpose of the laptop was to visualize the exam questions. The smart phone was used as a video camera which would be linked to Zoom or Google Meets, strategically placed at the corner back of the students; thus, the invigilator would have a view of the laptop screen and the candidate as well.

The variety of the questions types depend on the subject matter, but multiple choice questions are preferable; other types include gap-fill, matching, short answer, essay, etc. After completing the exams, students receive no feedback on questions or overall results. Exams are marked automatically (with graded questions) or by the teachers (with ungraded questions) and then the results are imported to Excel files and sent to the Department of Testing and Quality Assurance.

2. Methodology

The participants consisted of 110 second-year English majors (10 males and 100 females) in their second semester of the school year 2021-2022 at the School of Foreign Languages, Thai Nguyen University. Almost half of the participants (45.5%) described themselves as having intermediate experience in IT skills. The same number of the participants (45.5%) declared that they had proficient experience in IT skills; whereas, only 9.1% of them stated that they were an

expert in IT experience. Regarding the experience in online exams, all of the participants reported that they had taken one or two online exams at the university, and the tool that they used to answer the online exams was mainly by a laptop (72.7%), other tools were by a cellphone (18.2%) and by a computer (9.1%).

The Students' Perceptions of Online Examination Questionnaire adapted from Dermo (2009) was utilized as a major instrument to gather data. The questionnaire consisted of three main parts. In the first part, participants were asked for general information. The second part asked them to respond to a number of statements concerning their opinions of online examination, all worded positively and grouped into six domains: pedagogy, validity, reliability, affective factors, practicality and security. A five-point Likert scale was used in the second part (1 for Strongly Disagree, 2 for Disagree, 3 for Not Sure, 4 for Agree, 5 for Strongly Agree). The third part asked participants to select the important considerations needed for the successful implementation of online examinations. The survey was conducted from 3 January to 15 January 2022, right after the participants have completed their second online examination.

After screening 110 questionnaires, all of them were accepted for the analysis's purpose. Descriptive statistics were used in the present study. All the data obtained from the questionnaire were analyzed by calculating the frequency and percentage of students' responses on Excel.

3. Findings and Discussion

3.1. Usefulness of online exams

3.1.1. Pedagogy

Table 1 shows that only 23.6% of the participants agreed and strongly agreed that online exams provide immediate and automatic feedback on their answers. The failure to recognise the usefulness of feedback of online exams may result from the fact that not all of the online exams implemented at SFL are available to give immediate and automatic feedback on responses. However, more than two-thirds of the participants (83.6%) agreed and strongly agreed that using technology in online exams enables students to take a new learning approach: e-learning. This is consistent with the findings of the third question asked in the first part of the survey "*How do you describe your experience of online examination?*" in which all of the participants stated that the university was the only place where they had taken one or two online exams. Almost two-thirds of the participants (70%) thought that the online exams facilitated a more adaptive learning approach than paper-based ones. This is partially because the exams designed on the testmoz platform which the participants were familiar with at SFL were varied with different questions types such as multiple choice, gap-filling, matching, short answer, essay writing, etc. Therefore, it will be efficient to measure each test-taker's ability.

Table 1. Participants' responses on the usefulness of online exams in terms of pedagogy

Question items		Scales (%)				
1. Pedagogy		1	2	3	4	5
1.1	Immediate feedback in online exams helps learners to get a deeper understanding of the subject.	15.5	42.7	18.2	13.6	10.0
1.2	Using cutting-edge technology in online exams enables students to take a new learning approach: e-learning.	0.0	0.0	16.4	52.7	30.9
1.3	Online exams facilitate a more adaptive learning approach than paper-based ones.	2.7	4.5	22.7	44.5	25.5

3.1.2. Validity

Exam validity is one of the most critical components of the assessment. As can be seen from Table 2, participants perceived online exams as valid, in that they were appropriate for many subjects (72.7%) and well suited for assessing different learners' levels (75.5%). This illustrates that the combination of different question types, including items where students listen to audio

material, can demonstrate learners' comprehension and critical thinking; therefore, accurately measure and support learners' level of knowledge. However, a contrast percentage was found in the authentic assessment of the exams, in which 48.2% of the participants were unsure about and 5.4% disagreed and strongly disagreed with the integration of multimedia, simulations, etc. in the assessing process of the exam platform.

Table 2. *Participants' responses on the usefulness of online exams in terms of validity*

Question items	Scales (%)				
	1	2	3	4	5
2. Validity					
2.1 Online exams are appropriate for any subject area.	0.0	10.9	16.4	54.5	18.2
2.2 Online exams are appropriate to test learners' level of knowledge.	0.0	8.2	16.4	56.4	19.1
2.3 Online exams facilitate more authentic assessment than traditional methods through integration of multimedia, simulations, etc.	0.9	4.5	48.2	30.0	16.4

3.1.3. Reliability

Another important issue in any exam is reliability. Table 3 shows that more than half of the participants agreed and strongly agreed that automatic marking enhanced the accuracy of results and so brought fairness to the test-takers (62.7% and 56.4% respectively). This is consistent with the findings of Baleni (2015), who also found that transparent marking and immediate delivery of grades give learners more confidence in the results than in those of traditional tests [16]. A greater proportion (84.5%) of the participants agreed and strongly agreed that the technology used in online exams is reliable. This shows that the network students had used during the exam was robust and highly, efficiently connected. On the other hand, concerning cheating in online exams, a high percentage of participants (41.8%) are unsure if online exams reduced different ways of cheating since students did their exams at home without direct observation from the examinees.

Table 3. *Participants' responses on the usefulness of online exams in terms of reliability*

Question items	Scales (%)				
	1	2	3	4	5
3. Reliability					
3.1 Marking online exams automatically is more accurate than paper-based marking.	0.0	0.9	36.4	33.6	29.1
3.2 Online exams are fairer than paper-based exams.	0.9	3.6	39.1	36.4	20.0
3.3 The technology used in online exams is reliable	0.0	0.0	15.5	50.9	33.6
3.4 Online exams reduce cheating more effectively than paper-based exams.	8.2	14.5	41.8	24.5	10.9

3.1.4. Affective factors

Another important area of concern was the affective aspects of online exams. As can be seen from Table 4, about three-quarters of the participants agreed and strongly agreed that online exams reduced stress and anxiety and helped learners feel more comfortable than paper-based exams (82.7% and 71% respectively). Even though all the participants were first or second-time online test-takers, they seemed to be familiar with the online exam platform, perhaps because they sat for the exam at their own space in their home that would significantly reduce the invigilation from the examiners. However, 16.3% of participants reported that they did not focus and concentrate on the exam while they did it online.

Table 4. *Participants' responses on the usefulness of online exams in terms of affective factors*

Question items	Scales (%)				
	1	2	3	4	5
4. Affective Factors					
4.1 Online examinations reduce stress and exam anxiety.	0.0	0.0	17.3	62.7	20.0
4.2 Using online exams allows learners to focus and concentrate more on the questions.	2.7	13.6	24.5	36.4	22.7
4.3 Learners feel more comfortable doing an online exam than a paper-based one.	0.0	0.0	29.1	45.5	25.5

3.1.5. Practicality

Table 5 shows that a great proportion of participants (84.6% and 81.8%) agreed and strongly agreed that online exams are more efficient than paper ones in terms of time, effort, cost, storage

and review. The fully automated process can eliminate or simplify printing, grading, invigilation and staff workload, travelling, especially for large class sizes. In addition, half of the participants perceived online exams to be more accessible than paper-based ones, perhaps because of the easy platform and operation, the availability of time and place for the exam to be delivered.

Table 5. *Participants' responses on the usefulness of online exams in terms of practicality*

Question items	Scales (%)				
	1	2	3	4	5
5. Practicality					
5.1 Online exams are more efficient in terms of time, effort and money spent.	0.0	0.0	15.5	56.4	28.2
5.2 Creating a question bank of reusable multiple choice questions, allows easy storage and review.	0.0	0.0	18.2	54.5	27.3
5.3 Online exams are more accessible than paper-based exams.	0.0	4.5	45.5	27.3	22.7

3.1.6. Security

Security is a critical aspect of any exam. Table 6 shows that nearly half of the participants (44.5%) were confused that test materials and results are more secure when exams are held online rather than by traditional methods. Furthermore, a high percentage of "Not sure" and "Disagree" (65.5% and 63.6%) were found in the items that stated about the cheating and plagiarism of online exams. It is the fact that preventing cheating during online exams is difficult, given the availability of technologies such as wireless networking, mobile phones, etc. especially the situation that students did their exams outside the campus. These provided several ways for learners to search the Internet and to communicate with others during exams and are not easily blocked.

Table 6. *Participants' responses on the usefulness of online exams in terms of security*

Question items	Scales (%)				
	1	2	3	4	5
6. Security					
6.1 Test materials and results of online exams are more secure than traditional methods.	0.0	0.0	44.5	29.1	26.4
6.2 The technology used in online exams is sufficiently effective in dealing with cheating and plagiarism.	4.5	15.5	45.5	22.7	11.8
6.3 Using randomized questions from a bank means that cheating during online exams is less likely than for paper-based ones.	2.7	12.7	48.2	17.3	19.1

3.2. Considerations for the effective implementation of online exams

The survey also listed several considerations that might improve the implementation of online exams. Participants were asked to select items from a checklist; they were also invited to recommend more suggestions for the effective implementation of online exams. Their responses were then coded and organized into three groups: online exam design, online exam security and institutional support, as shown in Table 7.

Table 7. *Considerations for the effective implementations of online exams*

Question items	Frequency	%
1. Online exam design		
1.1. Maintain a bank of validated questions for adaptive testing.	81	73.6
1.2. Develop different types of questions type.	45	40.9
1.3. Provide immediate meaningful feedback	90	81.8
2. Online exam security		
2.1. Maintaining confidentiality	47	42.7
2.2. Minimizing cheating	28	25.5
3. Institutional support		
3.1. Providing support for students	79	71.8
3.2. Providing resources and facilitating procedures	17	40.9

It is clearly seen that the highest percentage of participants (81.8%) recognized the importance of feedback as a crucial consideration that might improve the implementation of online exams. In addition, 73.6% and 71.8% of the participants considered the bank of validated questions for

adaptive testing and support for students to be extremely important for the effective implementation of online exams. Moreover, as revealed in Table 7, about half of the learners considered it very important to maintain the confidentiality of online exams, the variety of the questions types (42.7% and 40.9% respectively). The item “*Providing resources and facilitating procedures*” received the considerable attention from the learners (40.9%) maybe because of the less familiarity of students with online exams, whereas 25.5% of them were concerned about the cheating during online exams.

4. Conclusion

In conclusion, along with the widespread and increasing use of online examinations at many educational institutions in Vietnam due to the Covid-19 pandemic, this study has examined the usage of such examinations and identified several factors to be considered to support the successful implementation of online exams from the perspective of SFL students. On the one hand, the participants perceived online exams as having significant advantages over traditional, paper-based ones, including appropriateness; stress and anxiety reduction; reliability of scoring; long-term efficiency in time, effort, travelling and costs; and security. On the other hand, from the students’ perspectives, immediate feedback, authentic assessment, cheating and plagiarism are not helpful aspects of online examination. Furthermore, successful implementation of online exams can be achieved by providing more detailed and immediate feedback, designing the exams to be more reliable and secure. Besides, it is also very necessary for the institutions to provide support for the students during the process of implementing online exams. The results of this study can be a starting point to improve the quality of e-learning in general and online assessment in particular since students’ perceptions and attitudes will be useful for the implementation of online examinations as a measure during the Covid-19 pandemic.

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