AN EXPERIMENT ON THE PROPOSED ONLINE ASSESSMENT AND EXAMINATION METHOD AT DALAT UNIVERSITY

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Article history

Received: May 5\textsuperscript{th}, 2023
Received in revised form: July 26\textsuperscript{th}, 2023 | Accepted: October 16\textsuperscript{th}, 2023
Available online: June 28\textsuperscript{th}, 2024

Abstract

Digital transformation is one of the key tasks of the education field. In this context, online teaching is becoming a potential solution in education to provide learners with a flexible learning environment that is independent of space and time. This trend has become even more urgent as the world has just experienced the global COVID-19 pandemic. Along with online teaching are methods of online assessments and examinations. The biggest challenges to online assessments and examinations are internet speed, authentication of the examinee’s identity, and test authenticity, especially for classes with large numbers of students. In this article, we propose an online oral exam process that can be applied to a large class but still ensures seriousness, fairness, and objectivity. Experiments conducted in 11 courses taught and assessed at Dalat University during the second semester of the 2020–2021 school year and the first semester of the 2021–2022 school year are discussed to illustrate the process.

Keywords: Assessments and examinations; Online education; Quality assurance.

DOI: http://doi.org/10.37569/DalatUniversity.14.2.1141(2024)

Article type: (peer-reviewed) Full-length research article

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1. INTRODUCTION

The Industrial Revolution 4.0, with its development trend based on the highly integrated foundation of the digitized physical-biological connection system and the breakthrough of the Internet of Things and artificial intelligence, is taking place at different speeds in many countries around the world and making a huge impact on all areas of economic and social life in our country. To date, Vietnam has made many decisions affirming that digital transformation is an indispensable process in the development of Vietnamese society and economy in the new era. Digital transformation in education is currently an inevitable trend to solve the problems of innovation and create breakthroughs in new educational methods. Unlike traditional teaching methods, today’s educational institutions are no longer defined solely as physical entities with campuses, classrooms, compulsory curriculums, unique curriculum systems, and so on. Multimedia, multi-platform, and multimodal learning methods with advanced educational technology have created a close link between formal and informal learning, meeting individual needs and promoting learners’ personal experiences.

Distance education, one of the fields of educational technology application, has been developed to create a lifelong learning society with flexible conditions for learners to accumulate knowledge, learn anywhere and anytime, and personalize their learning. In online teaching or distance education in general, due to the lack of an environment for proper educational activities, learners have to face all kinds of barriers in terms of space, time, technology, psychology, socioeconomic conditions, and so on. A quality online teaching system must be designed to help learners overcome all these barriers to accessing the knowledge necessary for their learning. This shows the need to review several basic and important issues in the process of developing and organizing the application of technology in education, thereby identifying appropriate measurement and evaluation methods that ensure quality, especially when combined with traditional teaching methods (Nguyễn, 2020a, 2020b). These issues have also attracted the attention of many research groups (Ahmed et al., 2021; Babbar & Gupta, 2022; Guangul et al., 2020). Regarding the inspection and assessment of learning outcomes, one of the important issues to be considered and solved is how to organize online exams to ensure seriousness, fairness, and objectivity.

To address this issue, it is necessary to study the process of organizing online exams for written, oral, and multiple-choice tests. This article proposes an online oral test process that can be applied to classes with a large number of students. The main content is presented in the following order: Section 2 summarizes the main steps in organizing an online oral test. Section 3 summarizes the issues arising from the practical implementation of this process in a number of classes. Section 4 offers some recommendations, and the last section is the conclusion.

2. THE ONLINE ORAL EXAM PROCESS

The organization of an online oral exam in the Google Meet environment is demonstrated in the process of lecturers preparing the organization of the exam and the process of students taking the exam.
2.1. The oral exam preparation and organization process

The stages in the lecturer's preparation and organization of the exam are shown in Figure 1.

Figure 1. A – The process of preparing and organizing the oral exam

The following are the main steps in the preparation and organization of the online oral exam:

A1. Lecturers provide review content. The lecturer summarizes and provides the students with the content they need to review for the exam.

A2. Students register for the exam. The lecturer announces the exam conditions based on the list of students enrolled in the course. Students are required to have an internet-connected device with a camera and microphone, an internet connection, and a student or citizen identification card. Students provide their contact information (phone number) and confirm their intention to take the exam. This is done to calculate the number of students who will participate in the exam to provide a reasonable allocation of exam time and to prepare test sets.

A3. Preparation before the exam. Based on the list of students registered for the exam, the lecturer group in charge of the module performs the following tasks:

- Determine the number of lecturers participating in the question-and-answer (Q&A) session and check-in procedure. On that basis, estimate the number of Q&A and check-in rooms needed and the corresponding number of Google Meet links required.
• Determine the structure and number of test sets required. Ensure that the number of different test sets is not less than the number of students who have confirmed their intention to take the exam. On this basis, the lecturer group determines the number of questions (with answers) for each section of the test set.

• Randomly draw content for each section of each test set to prepare a test bank for the online oral exam. Build test sets according to the template. Each test set is in a separate PDF file.

• Create an Excel file to randomly draw a test code for each exam taker.

• Randomly allocate exam time to each student. Design a schedule that allocates exam time for each student and another one for proctors to check in and distribute test codes, including a hard copy and a file on Google Drive shared among the exam organizers. Design a scoreboard for the lecturers in charge of the Q&A session to enter scores.

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**A4. Meeting with students to disseminate exam procedures and regulations.** The lecturer in charge of the course will hold an online meeting to disseminate the exam regulations, announce the exam schedule, and guide students through the exam process. The information will also be sent via email to all students registered for the course.

**A5. Organizing the oral exam according to the schedule.** On the basis of the school’s exam schedule, the lecturer group conducts the exam activities according to the exam procedures.

2.2. **The process of students taking the oral exam**

Students take the oral exam according to the procedures shown in Figure 2.

The main steps in the online oral exam process for students are as follows:

**B1. Check-in room activities and random selection of test codes.** The students arrive on time for the exam and enter the check-in room by following the provided Google Meet link. The students then present their student cards to the examiner so that their personal information can be verified and their photos taken to confirm their participation. Test codes are then randomly selected, and each student receives an email with a test set (a PDF file), a designated time to enter the Q&A room, and a link to the Q&A room. Students confirm receipt of the email with the test set and related information from the examiner. The students then leave the meeting while the examiner updates each student’s test code on the Google Sheet file to share information among the examiner group.

**B2. Preparing answers to the questions in the received test set.** After leaving the meeting, each student has approximately 15 minutes to answer the questions.
B3. Q&A room activities. Students must arrive on time at the Q&A room. Each student provides their personal information and test code to the lecturer for verification. Then, the student presents their test-set answers to the lecturer and answers the lecturer’s questions. At the end of each individual exam, the lecturer summarizes and informs the student of their final score.

B4. End of the individual test. After receiving the test score, and if there are no further questions, the student leaves the oral exam room, ending the individual test. Students are responsible for keeping their individual test questions confidential until the end of the exam day.

Figure 2. B – The process of students taking the oral exam

The exam process seeks to maintain seriousness, fairness, and objectivity in assessing students’ exam results by means of the following three points: (i) Exam times are randomly allocated to ensure fairness in the student’s exam entry time. (ii) The module test bank is formed by a random selection of each section’s content to create test sets, and an index number (called a test code) is randomly assigned to each set. The sets of test questions are sealed and sent to the department (faculty) prior to the exam. This is to ensure objectivity in the index number of each test set associated with the content. (iii) The random selection of test codes for students is intended to ensure objectivity so that no bias exists regarding the questions students receive.

An illustration of the online oral exam process is shown in Appendix A.
3. IMPLEMENTATION

At the time of the outbreak of the COVID-19 epidemic (school years 2020–2021 and 2021–2022), the Vietnamese Ministry of Education and Training (MOET) required educational institutions to shift to online education and assessment. In order to have a basis to fulfill the MOET’s requirements, the author team conducted a survey on the online exam conditions of students in the classes of which the group was in charge.¹ (See Appendix B for the survey results). In order to implement traditional forms of examination and assessment in the online environment while still ensuring seriousness, fairness, and objectivity, especially for classes with many students, we will possibly face the following obstacles: (i) for online written or multiple-choice tests, it is difficult to identify whether the work was done by the students themselves, and (ii) for essay writing, the students’ essays must be authenticated through an online presentation, which takes a lot of time to organize. Therefore, we found that the most feasible option to ensure seriousness, fairness, and objectivity in terms of the conditions of the students’ facilities is to organize an online oral exam according to the proposed process.

We have implemented this online exam process in 11 classes at Dalat University with a total of 831 registered students, of which seven classes were in Semester 2, 2020–2021 (August 2021 session), and four classes were in Semester 1, 2021–2022. The total number of students who confirmed to take the exam was 701. In terms of size, there were two classes with over 150 students, six classes with 60 to 100 students, and three classes with fewer than 20 students. It took each student about 25 minutes to complete the individual oral exam, including 5 minutes for checking in and receiving the test set, 15 minutes for preparing answers, and 5 minutes for the Q&A session. Thus, for two classes of over 150 students, it is possible to hold two exam sessions per class. For the remaining classes, there was one exam session per class. Regarding the number of lecturers participating in organizing the exam, there were six classes organized by three lecturers in one session, including one lecturer conducting exam procedures and distributing questions and two lecturers participating in the Q&A session, so we needed three exam rooms (equivalent to three Google Meet links). The remaining five classes only needed two exam organizers, including one lecturer in charge of the exam procedures and distribution of the questions and one Q&A lecturer, so we needed two exam rooms (corresponding to two Google Meet links). The total number of test sets prepared by the group of lecturers was 763. The total number of students actually taking the exam for these 11 modules was 681. The details are given in Table 1.

¹ Most of these classes are in the natural sciences or information technology.
<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Class</th>
<th>Number of registered students</th>
<th>Number and duration of the exam sessions</th>
<th>Number of exam organizers</th>
<th>Number of check-in rooms</th>
<th>Number of Q&amp;A rooms</th>
<th>Number of students who confirmed to take the exam</th>
<th>Number of test sets</th>
<th>Number of students who actually took the exam</th>
<th>Exam schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Probability and Statistics</td>
<td>CTK42</td>
<td>76</td>
<td>1 (7:00–12:00)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>71</td>
<td>75</td>
<td>71</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>2</td>
<td>Discrete Mathematics</td>
<td>CTK44A, CTK44B</td>
<td>162</td>
<td>2 (7:00–11:30) (13:00–17:15)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>122</td>
<td>140</td>
<td>108</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>3</td>
<td>Databases</td>
<td>CTK43</td>
<td>89</td>
<td>1 (7:00–12:15)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>73</td>
<td>80</td>
<td>74</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>4</td>
<td>Probability and Statistics</td>
<td>NHK44, CHK44</td>
<td>93</td>
<td>1 (7:00–11:45)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>68</td>
<td>75</td>
<td>61</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>5</td>
<td>Discrete Mathematics</td>
<td>TNK44, TNK44SP</td>
<td>60</td>
<td>1 (7:00–11:00)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>51</td>
<td>60</td>
<td>50</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>6</td>
<td>Probability</td>
<td>TNK42, TNK42SP</td>
<td>18</td>
<td>1 (7:30–10:00)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>7</td>
<td>Statistics for the Social Sciences</td>
<td>GTK44SPA, GTK44SPB</td>
<td>175</td>
<td>2 (7:00–12:45) (13:00–18:45)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>161</td>
<td>175</td>
<td>160</td>
<td>Semester 2, 2020–2021</td>
</tr>
<tr>
<td>8</td>
<td>Discrete Mathematics</td>
<td>KLK45</td>
<td>8</td>
<td>1 (9:00–10:15)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>Semester 1, 2021–2022</td>
</tr>
<tr>
<td>9</td>
<td>Probability and Statistics</td>
<td>VTK44</td>
<td>68</td>
<td>1 (7:00–12:35)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>57</td>
<td>58</td>
<td>60</td>
<td>Semester 1, 2021–2022</td>
</tr>
<tr>
<td>10</td>
<td>Statistics for the Social Sciences</td>
<td>DPK44</td>
<td>66</td>
<td>1 (7:00–12:25)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>58</td>
<td>60</td>
<td>58</td>
<td>Semester 1, 2021–2022</td>
</tr>
<tr>
<td>11</td>
<td>Mathematical Statistics</td>
<td>TNK42, TNK42SP</td>
<td>16</td>
<td>1 (13:00–15:30)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>Semester 1, 2021–2022</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>831</td>
<td>13</td>
<td>28</td>
<td>11</td>
<td>17</td>
<td>701</td>
<td>763</td>
<td>681</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Statistics of classes with online oral exams
When applying the process described above, we noticed the following advantages:

Flexibility in handling problems that occur during the exam session, such as power outages experienced by students or exam organizers and interruption of transmission lines, is important because it is not necessary to re-organize the online oral exam for the entire class, but only for the few students affected by the incident. Specifically:

- If a check-in room proctor experiences a power outage or other incident, the following procedures shall be performed: The proctor shall notify the class monitor and the Q&A examiners of the incident. The proctor moves to a suitable location and then informs the students who are taking the exam at the time of the incident that their exam time order will be moved to the bottom of the list and recalculated. If the Q&A lecturer experiences a power outage, the Q&A lecturer shall notify the check-in room proctor and the class monitor of the incident. After the Q&A lecturer has found a suitable place, the check-in room proctor will notify the affected students that their exam time will be moved to the bottom of the list in the correct order, cancel the test sets randomly selected for this group of students, and update the time to re-implement the random question selection process for these students.

- If a student experiences a power outage, the student will notify the check-in room proctor, who will update the student’s status on a Google Sheet file shared among the group of exam organizers. Depending on the severity of the problem, the proctor will decide whether the student can continue answering the chosen test set or if the exam process should be re-implemented after the student has fixed the problem.

With the published exam time allocation schedule, each student can actively arrange the time and choose the location and equipment for the exam. Students do not have to spend much time on the individual oral exam. In addition, students are also facilitated in arranging a suitable exam time in the case of a duplicate exam schedule.

4. RECOMMENDATIONS

Regarding the arrangement of exam time, if the check-in room proctor distributes questions to one Q&A examiner (called a two-person unit), the time allocated for each student to complete the exam check-in procedure is 5 minutes. If the check-in room proctor distributes questions to two Q&A examiners (called a three-person unit), the time allocated for each pair of students to complete the exam check-in procedure is 7 minutes. Thus, with a large class, we have two options: organizing the exam in multiple sessions or increasing the number of three-person units to conduct the online oral exam process in parallel. However, it is advisable that the online exam for one class take only one day.

A relatively large number of test sets must be prepared to avoid duplicating the content of the test sets and to maintain the objectivity and fairness of the exam. If the exam for a class requires many sessions, it is necessary to use a different test bank for each session.
All documents for the exam process are saved in the form of printed copies with the signatures of the parties involved. Video recordings of the exam sessions are also filed for quality assurance and are not used for other purposes.

Challenges that may affect the application of this exam process for a large class are (i) a lack of lecturers at the educational institution with the same or similar expertise to participate in Q&A sessions for the course (the same issue may occur in an essay presentation), and (ii) limitations on facilities when the lecturers have to use their homes to organize the exam. They may face disruptions to the power system or unstable internet connections. These problems can be overcome by the regulations of the educational institution on balancing between the minimum number of lecturers in charge of a course and the maximum number of students per class, as well as by building enough online exam rooms to ensure adequate infrastructure exists at the educational institution so that the lecturers can organize the exam on site instead of having to use their homes.

5. CONCLUSION

In this article, we present a design for an online oral exam process using the Google Meet environment. The main steps in preparing and organizing the exam by the lecturers and in taking the online exam by the students are described. Comments and recommendations are given based on observations made throughout the implementation of the exam process for a group of classes. Despite difficult conditions during the COVID-19 epidemic, the online oral exam process was conducted successfully. Therefore, with adequate preparation of people and facilities, this proposed online assessment/examination method is completely appropriate for online education, which is one of the important and urgent issues of current education to achieve the goal of digital transformation and to build a lifelong learning society.

ACKNOWLEDGMENTS

The authors would like to thank all the anonymous reviewers for their comments, which improved the quality of the paper. This research was financially supported by Dalat University.

REFERENCES


Appendix A. An illustration of the online oral exam process

We illustrate here the organization of the online oral exam for the social science statistics module of the primary education class GTK44SPA under the Faculty of Education of Dalat University. The number of students registered for the course was 88, and the number of students who confirmed to take the exam was 86. There were three exam rooms: one check-in room and two Q&A rooms. Three lecturers participated in the exam. The exam structure consisted of two parts, and the exam bank included 88 test sets. The exam time was from 7:00 a.m. to 12:45 p.m. on August 15, 2021. The steps of the proposed online oral exam process are shown in Figures A1 to A14.

![Course: Statistics for Social Sciences](image)

**Review: Contents of Statistics for Social Sciences**

**I. Descriptive Statistics**

- Concepts: population, sample, sample size, measurement scale, quantitative variables and categorical variables (see Lecture notes on Statistics for Social Sciences, pages 6 - 9).
- Describing data with tables and graphs (see Lecture notes on Statistics for Social Sciences, pages 11 - 21).
- Describing the center of the data: mean ($\bar{X}$), median (Me), mode (Mo).
- Describing variability of the data: range, unbiased sample variance ($S^2$), sample standard deviation ($S$).

(see Lecture notes on Statistics for Social Sciences, pages 21 - 28).

**Instructions**

- Understanding of concepts.
- Skills:
  - For a given data set:
    + Determine sample size and variables.
    + Compute the sample mean, median, mode, variance and standard deviation using statistical software (e.g., Microsoft Excel, R, ...) and pocket calculator.
    + Choose appropriate statistical charts to describe the data.
  - Practice from guided class exercises, chapter exercises, and group’s exercises.

Figure A1. Part of the study guide for the social science statistics module
Ta Thi Thu Phuong, Huynh Bao Tuyen, and Dang Phuoc Huy

Figure A2. Exam registration form shared via email for students to provide their information

Figure A3. Random selection of contents to design a test bank
ONLINE ORAL EXAM QUESTION
Course: STATISTICS FOR SOCIAL SCIENCES (TN2010D)
Class: GTK44SPA    Semester: II, School year: 2020-2021
Exam schedule: 07:00 (AM) August 15th, 2021

Regulations:
- After receiving the oral exam questions, students have 15 minutes to prepare.
- After the 15 minutes of preparation, students immediately follow the link attached to the email containing the questions to meet the Q&A examiner. (Note: The Q&A examiner will start calculating the Q&A time of 5 minutes right after the 15 minutes of preparation).
- Q&A time for each student: 5 minutes.
- Once receiving the oral exam questions, students are responsible for keeping it confidential until the end of the exam day.
- Any violation of these regulations in any form is considered as breaking the rules, and may result in the cancellation of the exam result.
- All numerical results are rounded to 4 digits.

Question 13: (2.0: to evaluate the ability of students' answers)

A. (4.0) A survey on the ages of the employees at company AA gives the following data:

<table>
<thead>
<tr>
<th>Age</th>
<th>&lt; 30</th>
<th>30 - 40</th>
<th>40 - 50</th>
<th>50 - 55</th>
<th>≥ 55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>60</td>
<td>30</td>
<td>25</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

a. Determine the size of the sample.
b. Calculate the sample mean and sample standard deviation.
c. Compute the relative frequency of employees that are under 50 year old in this sample.
d. Find the median of the given data set.

B. (4.0) A survey of 100 full-time students at University T found 18 students who use social network less than 5 hours per week. Estimate the confidence interval for the proportion of students at University T who use social network less than 5 hours per week with 97% confidence level?

a. Compute the relative frequency of students with less than 5 hours of social network usage per week.
b. Are the size of the sample and the sample proportion of sufficient magnitude to justify
   used of the standard normal distribution in constructing a confidence interval? Why?
c. Calculate the standard error. Find the reliability coefficient.
d. Construct a confidence interval for the proportion of students at University T who use
   social network less than 5 hours per week with the given confidence level.

Note: - Some values of z Table:

$z_{0.65} \approx 1.64; z_{0.03} \approx 1.88; z_{0.025} = 1.96; z_{0.02} \approx 2.05; z_{0.015} = 2.17; z_{0.01} \approx 2.33.$
- Scaled score: 10/10.
Figure A5. Excel file for random selection of the exam order and allocation of exam time for students

Figure A6. An illustration of the exam time allocation schedule sent to students
Figure A7. An illustration of the exam time allocation schedule sent to the check-in room proctors

Figure A8. An illustration of the exam time allocation schedule file shared on Google Drive among the group of exam organizers
Figure A9. An illustration of the scoreboard for Q&A examiners
Hello everyone,

The lecturer sends you instructions on how to complete the oral exam procedures for the SOCIAL STATISTICS module on the morning of August 15, 2021. As follows:

1. View time allocation schedule (see attached file) to know the individual oral exam start time.
2. On time for your individual exam, please go to the following link to complete the exam procedures:
   https://meet.google.com/uyu-glay-syy

After entering the meeting, students take the following steps (note that students must turn on the camera and microphone):

**Step 1:** Students taking the exam present their student ID card identification card to instructors carry out exam procedures and record information.

**Step 2:** Follow the random drawing of questions.

**Step 3:** Receive an email containing information: Questions, time to answer questions and answers room link.

**Step 4:** Confirm with the instructor completing exam procedures that he has received the questions and related information.

**Step 5:** Leave the room (leave the meeting) do the exam procedures and prepare to answer questions.

In case of emergency, students please contact [insert contact information] at phone number [insert phone number].

**Note:** After receiving the question, students have about 15 minutes to prepare an answer. Students are allowed to use documents and Casio machines. Read carefully the regulations at the beginning of the question.

Wish you all peace and have a good exam.

GV

Phạm Thị Thu

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**Figure A10.** An illustration of an e-mail notifying students of the exam time allocation schedule and instructions on the exam process for students

Note: The email was auto-translated from Vietnamese to English by Gmail.

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**Figure A11.** An illustration of the process of confirming personal information and taking photos of students participating in the exam
Figure A12. An illustration of the random selection of questions for students

Figure A13. An illustration of an email for exam questions (a test set), link to the Q&A room, and time to enter the Q&A room sent to one exam-taker

Note: The email was auto-translated from Vietnamese to English by Gmail.
Appendix B. Survey on students’ online examination conditions

We conducted a survey on the conditions to organize online exams for seven courses by the author team in the second semester of 2020–2021 at Dalat University. A total of 640 registered students were surveyed, and feedback was received from 457 students. The survey contents include the students’ personal information (full name, student number, email address, and class); their residence location and isolation situation due to the COVID-19 epidemic; their equipment and internet connection for the online exam; the online exam forms students received; the problems encountered during the online exam (if any); the students’ feelings about the fairness and objectivity of the online exam; and the ability of the students to meet the equipment and internet connection requirements to take the online exam. (Each student needed a computer with a camera, a smartphone, and a stable internet connection.) The survey results are given in Table B1. According to the survey results, of the 404 students who participated in the online exam, 148 commented on the problems that occurred during the exam related to issues such as electricity, internet connection, the server, the LMS system, submission of photos of the exam paper, and other problems. Only 186 of 457 students (41%) met the online exam conditions of a computer with a camera, a smartphone to cover the exam area, and a stable internet connection. Notably, 122 of 457 students (27%) think that taking the online exam was neither fair nor objective. The specific survey results are shown in Figure B1.
Table B1. Summary of the exam conditions survey

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Class</th>
<th>Number of students surveyed</th>
<th>Number of students who responded</th>
<th>Number of students living in Lam Dong Province</th>
<th>Number of students staying in quarantine or blockade areas due to the COVID-19 epidemic</th>
<th>Number of students who participated in the online exam</th>
<th>Number of students with laptops or desktops with built-in webcams</th>
<th>Number of students with a smartphone or tablet</th>
<th>Number of students meeting the online exam conditions</th>
</tr>
</thead>
<tbody>
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