(RESEARCH ARTICLE)

# Improving quality in online tests and assessments using extended forms on google form background

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## Abstract

Today, teaching and learning at all levels is combining traditional teaching methods with online teaching via the Internet (teaching and learning, remote assessment through the network environment). In addition to teaching culture and expertise for long-term classes, there are refresher courses and online distance learning (digital university). Contributing to improving the quality of teaching and online assessment in the current period, the author has researched and tested the assessment of learning outcomes based on extended forms combined with google form. The assessment process shows more secure results (compose questions, answers and manage assessment test results using lock mode and encrypt the test path). The program can be applied to different training systems.

**Keywords:** Online Training; Distance Learning; Online Assessment; Safety in Online Assessment; Online Question Composing; Online Quizzes; PTIT.

## 1. Introduction

Compose a set of exercises, and a set of common test questions used in the teaching and assessment process is very necessary, and the set of questions used to evaluate the results must be kept confidential during the implementation of the test and evaluation at the end of the term [3-5].

### 1.1. Classroom exercises

The set of exercises is built and applied for online learners based on the issued training program and conditions for learners to perform with their own devices and connections. The questions are distributed to learners through google's online classroom system [4].

### 1.2. Set of test and evaluation questions

The set of online test and assessment questions is built according to the issued training program, and conditions for learners to do it with their own device and connection. Questions are developed and distributed to students through Google's online assessment and classroom system [6].

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## 1.3. Steps to build a set of exercises and questions



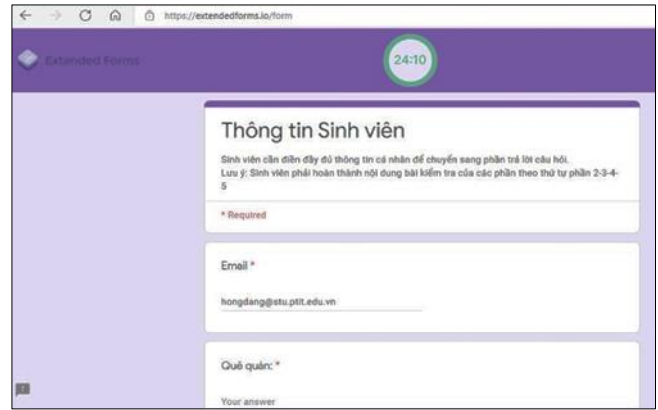**Figure 1** Handout exercises for students in online classes



**Figure 2** Questionnaire distributed to students in online learning outcomes assessment

- Step 1. Group exercises/questions according to the practice content of each practice session/subject.
- Step 2. Build a set of exercises/questions that cover the content from easy to difficult and advanced.
- Step 3. Construct the answer set corresponding to the question that has been built. The answer set is built according to the steps that have been taken during the exercise and practice.
- Step 4. Review and check assignments/questions and answers
- Step 5. Match the exercise/question with the answer, get approval to use.
- Step 6. Create database on google forms
- Step 7. Install Extended Forms to Encrypt Time Setup and Quiz Lock
- Step 8. Test, evaluate and put into practice.

## 2. Material and method

### 2.1. Steps to create an online assessment test database

Through practice, it shows that the percentage of learners who have Gmail accounts and have their own email accounts and online learning accounts are provided by the training institution. Therefore, the evaluation of the results of the exercises/practices, etc. can be applied on the google platform in combination with Extended Forms.

*2.1.1. Create a database of exercises on Classroom, Trans, Zoom, Meet, Teams*

- **Step 1**. Access to Classroom
  o Log into Classroom with your personal gmail account
  o Click on the plus sign → select create class and name the class


- **Step 2** Enter class information and upload the content of the exercise
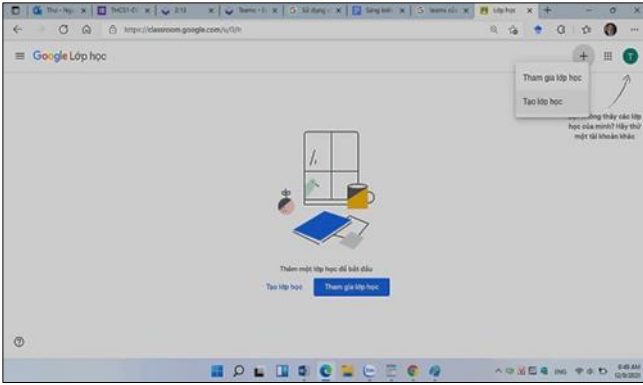  o Enter information and create classes

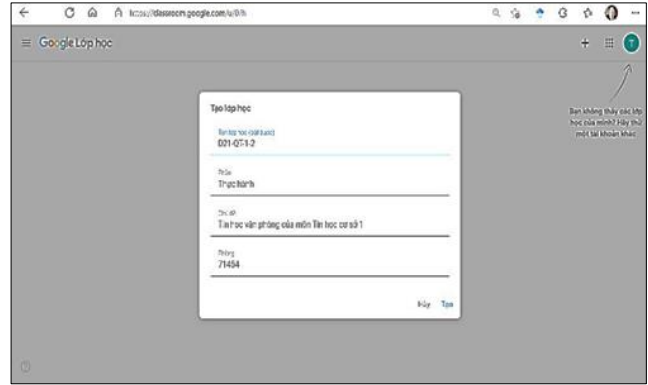**Figure 3** Classroom creation interface of classroom



**Figure 4** Entering information and creating a class

- Step 3. Upload the content of the exercises and give them to students
- Step 4. Assign class codes to students and guide students online via Trans, Zoom, Meet, Teams and Classroom



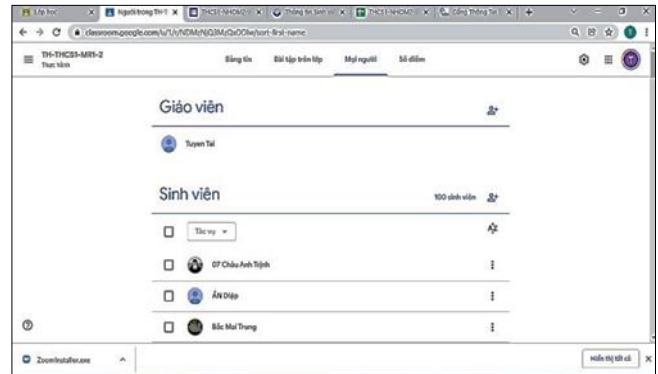**Figure 5** Uploading the content of the exercise to the classroom



**Figure 6** Granting class codes to students, guiding students to implement lesson content Step 5. Receive students' questions and answer them via Trans, Zoom and Classroom

*2.1.2. Create database for testing/assessment*

Create a questionnaire with google forms.

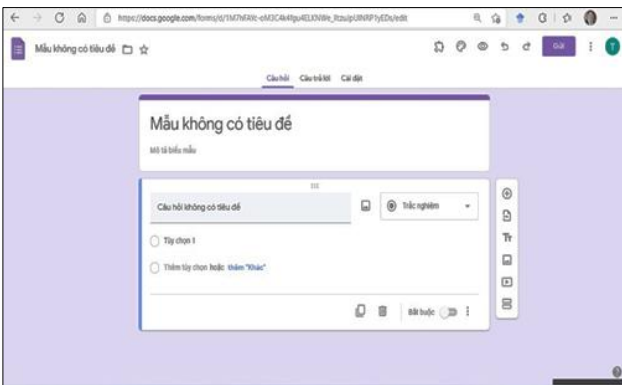- Step 1. Log in to gmail then open google forms interface



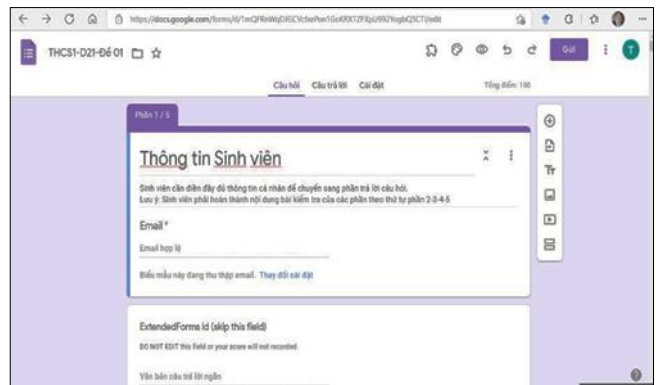**Figure 7** Sign into the form on google forms to create a quiz



**Figure 8** Enter questions and answer texts

- Step 2. Enter the name of the test and the question and answer (steps to perform the practice).
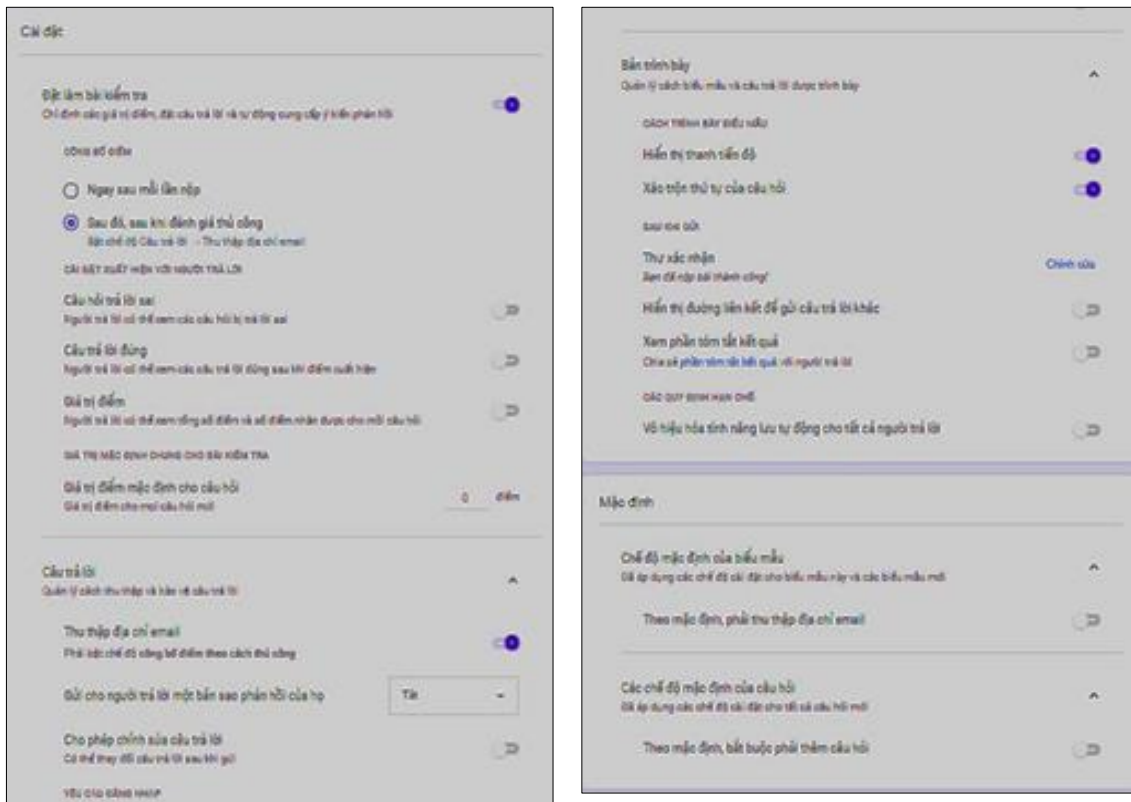- Step 3. Test mode setting

**Figure 9** Setting up the test mode on google form

*2.1.3. Install Extended Forms application for google form*

Extended Forms was created to fix the duplication of the test link on Google forms and add a countdown timer to let students know the estimated time to take the test [1-2].

Especially the course does not allow students to share the test with others.

- Step 1. Install Extended Forms

Go to google search page enter Extended Forms to open the page



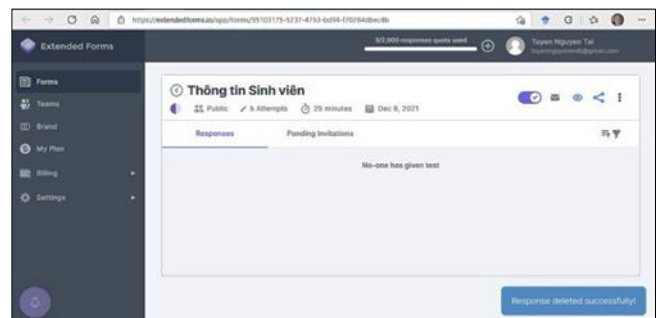**Figure 10** Extended Forms interface



**Figure 11** Extended Forms interface after being installed on google form

- Step 2. From the interface in Figure 11, the lecturer clicks Install App to install the application for google Form.
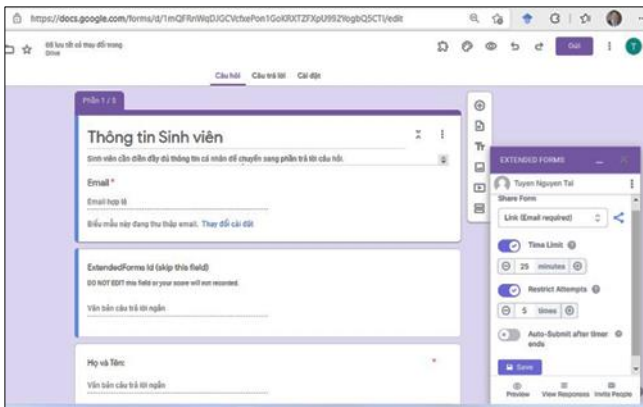- Step 3. Set the time to do the test and remind students before the end

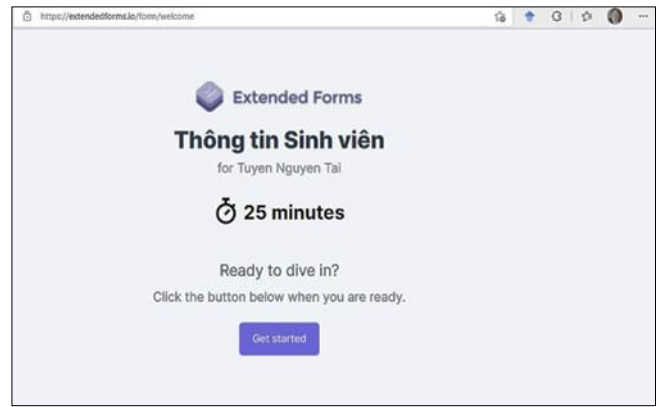**Figure 12** Time setting interface on Extended Forms



**Figure 13** Exam interface on Extended Forms

- Step 4. Distributing quizzes to students

To distribute the test to students, the lecturer uses the authentication via the registered student's gmail, the combination of the email issued by the academy to the student and the Trans ID, the student code.

The test will be sent by the lecturer to the student via email, the student will click to open the test interface.

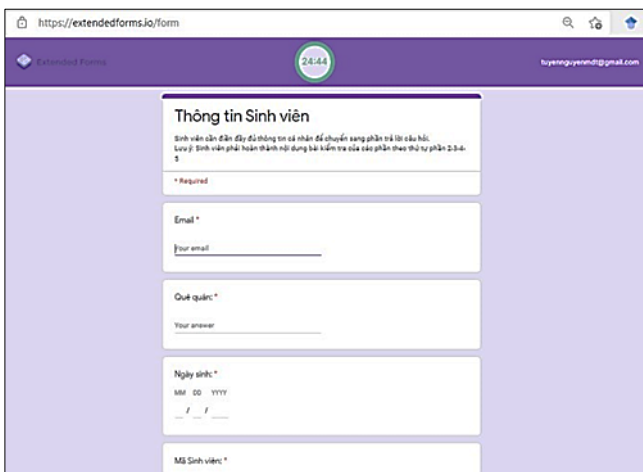- Step 5. Students click Get Started to fill in personal information



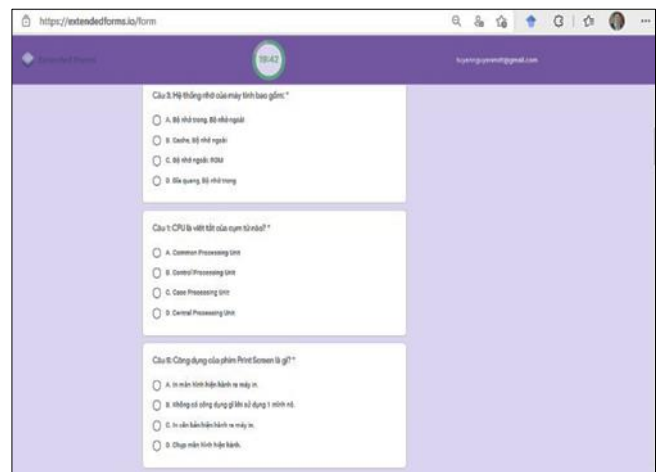**Figure 14** Student's information filling interface



**Figure 15** Student interface using Extended Forms    on Extended Forms
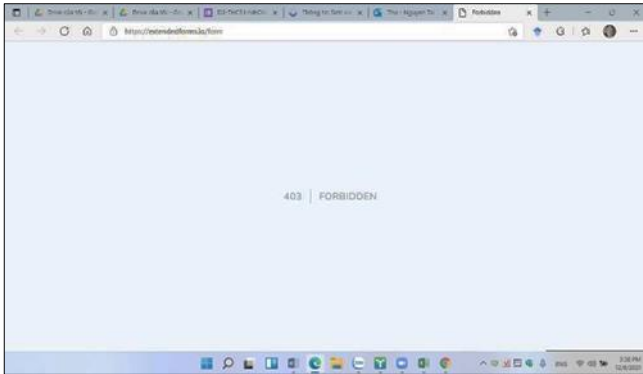
- Step 6. Students do homework



**Figure 16** Student interface to re-enter after completing the test



**Figure 17** Student results after completing the test

- Step 7. Instructors view results and announce to students

- Necessary conditions to apply

   - + Permission is required from the training institution for use in online teaching and assessment.
   - + Teachers need to be licensed to use Extended Forms to be able to install google forms to encrypt and lock the path to the test.
   - + Students must have a computer connected to the Internet and a smartphone to take the test, and send pictures of students during the test to the teacher/supervisor.

## 3. Results and Discussions

**Table 1** Students participating

| Number | Content | Number of Students participating | Result | Note |
|--------|---------|----------------------------------|--------|------|
| 1 | Taking the test without Extended Forms. | >500 | Students logged in on 2 computers at the same time to take the test | Cheating may occur during the test. |
| 2 | Taking the test with a combination of Extended Forms. | >500 | Students can only log in on 1 computer at the same time to take the test. | Extended Forms Limit cheating while taking the test. |

## 4. Conclusion

The application will help students of the whole course to use the same exercise content and the same assessment test content. Especially the security against sharing, copying the link ensures that the test questions are secure. This will bring greater efficiency, creating fairness for learners in the process of testing and evaluating results.

Help secure the test effectively and the source of exercises can help learners practice anytime, anywhere whenever they have time.

## Compliance with ethical standards

*Disclosure of conflict of interest*

No conflict of interest to be disclosed.

*Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

## References

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[2]     Timer for Google Forms - Extended Forms - Google Workspace Marketplace, https://workspace.google.com/ /marketplace /app/timer_for_google_forms_extended_forms/763170157069

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