

GOOGLE CLASSROOM as a Collaborative Tool for Academics in Online Learning

Resti Amalia¹, Tri Hidayati², Perani Rosyani³, Ines Heidiani Ikasari⁴, Ita Handayani⁵, Devi Yunita⁶, Pari Purnaningsih⁷, Yolen Perdana Sari⁸, Shelvi Eka Tassia⁹, and Resti Isnaeni¹⁰
{¹dosen00850@unpam.ac.id, ²dosen01385@unpam.ac.id, ³dosen00837@unpam.ac.id,
⁴dosen01374@unpam.ac.id, ⁵dosen01947@unpam.ac.id, ⁶dosen00846@unpam.ac.id,
⁷dosen01028@unpam.ac.id, ⁸dosen01705@unpam.ac.id, ⁹dosen01768@unpam.ac.id,
¹⁰dosen01300@unpam.ac.id}

Department of Informatics, Faculty of Engineering, Universitas Pamulang, Pamulang, Banten, Indonesia

Abstract. Teaching and learning activities are not only done in the classroom, but can be done remotely. With Internet media, we can do teaching and learning activities without having to meet face to face. Google Classroom is one of the features or tools of Google Apps as an online learning media. Google Classroom is designed to be able to help teachers, lecturers, or instructors to create and to collect assignments without using paper to save costs and time. With this training, we expected that teachers can improve quality and creativity in providing lessons.

Keywords: Google Classroom, online learning, teaching

1. Introduction

In the era of industrial revolution 4.0, an educator is required to be able to carry out Internet-based learning and information technology. Along with the development of technologies and to provide services and facilities for students. A comprehensive and accessible education needs to be presented in the school system. The technology based education system in education is a revolution that will shift pressure from teaching to new ways of learning as a condition for education system [1]. Therefore, educators must be able to master information technology that supports information technology-based education systems and show that internet technology is beneficial for education [2].

Information technology-based education systems that are in line with the development of today's technology are changing the concept of learning, which previously used traditional methods to be based online, or what is called e-learning. At present, the concept of e-learning has been widely accepted by the world community, as evidenced by the widespread implementation of e-learning in educational institutions and industry [3]. E-learning is one method of distance learning, it can be used to adapt learning needs that support conventional learning. By using E-learning, this helps limit problems, including time, distance and costs, and becomes an opportunity to facilitate the learning process [4].

E-learning solutions are considered more effective, but unfortunately, many schools still have not been able to provide online learning systems in their school. It because of the high cost of making the web for online learning and also the limited capacity of educators. These factors are challenges for improvements that must be made in the teaching and learning process [5]. Therefore, in order to improve the quality and creativity of teachers at Kebangsaan High School, we are trying to implement the use of e-learning using Google Classroom tools to overcome problems in existing limitations, including in terms of financial aspects of schools.

Google Classroom is a free web-based platform that is an important management course and popular application in higher education [5]. This is designed to help teachers save time and papers, organize classes, and improve communication with students. Teachers can make assignments, send announcements, and start class discussions instantly, as students can share resources with each other and interact in streaming classes or via email [6].

Previous research [7] uses Google Docs for collaboration in learning media to facilitate learning activities, but still uses traditional methods, such as attaching documents and sending via email, so the learning process is still considered inefficient, because one must choose one by one who will be sent or received. Further research that combines Google classroom with Google form to make homework and assignments of students, then shared with students. The result is that students are quite satisfied to do homework with an online system [8]. With the Google Classroom as a time saver in making automatic copies, it can facilitate innovative learning methods with existing technological developments.

Therefore, we propose online learning with Google Classroom to realize the implementation of information technology in education and can be accessed free of charge for Google account owners. And it can increase interaction between teachers and students as well as increase student motivation in learning [9].

2. Methodology

Google Classroom is an application that is devoted as an online learning media or the term is an online class, so that it can facilitate the teacher in making, sharing, and classifying each task without using paper anymore. This activity makes learning more effective, especially teachers and students can meet face to face through online classes at Google Classroom at any time. And also the teacher can later learn how to coordinate students to be able to study, listen, read, or send assignments remotely.

The methodology in this study is in the form of activities that include introduction and training [10]. This activity includes subjects about the initial introduction, such as Google, Google Classroom, and for implementing online learning through Google Classroom. The first subject provides an explanation of Google and its features including Google account, Google email, and Google Classroom. A subject on how to create a Google account will also be explained. The second subject is about Google Classroom, is about various features and how to create a Google Classroom. In this subject, teachers are expected to be able to create a Google Account and a Google Classroom. The third subject is about how to organize online learning through Google Classroom. Various stages will be explained, such as making classes, uploading

subjects, giving evaluations, and others. In reviewing this application, there are two questions asked 1) what steps are needed to start Google Classroom, and 2) what limitations does Google Classroom have.

3. Steps for implementing the Google Classroom

Step 1: Open website Google Classroom: <https://classroom.google.com/>, then log in with your Google Account. The display will appear like Fig 1 below.

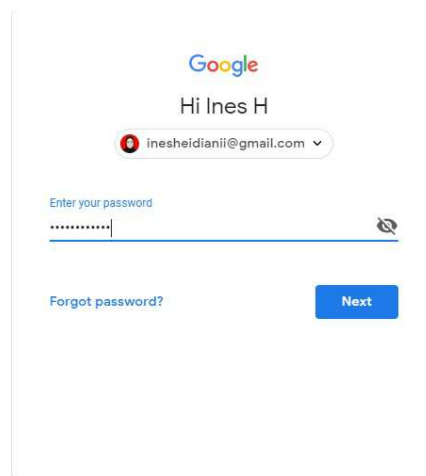


Fig 1. Log in display

The display in Fig 2 is a display when logged into the Google Classroom.

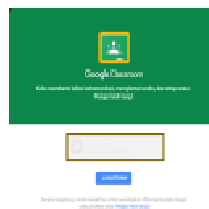


Fig 2. Google Classroom display

Step 2: How Teacher creates a class. A class here is a group made for teachers (Fig 3), so they can upload any subject for students to learn (Fig 4).

Step 3: See member in a class (click "ORANG" or "PEOPLE") as in Fig 5.

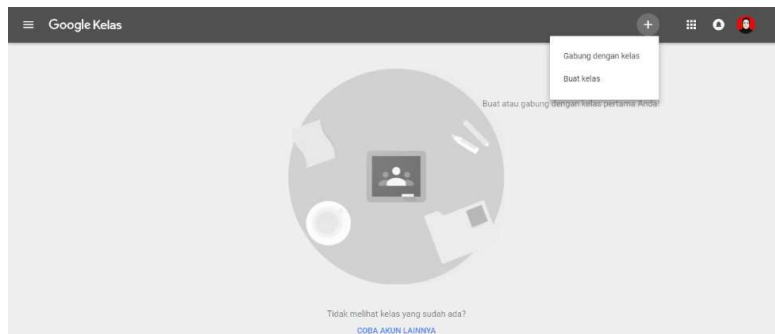


Fig 3. Class display for teachers

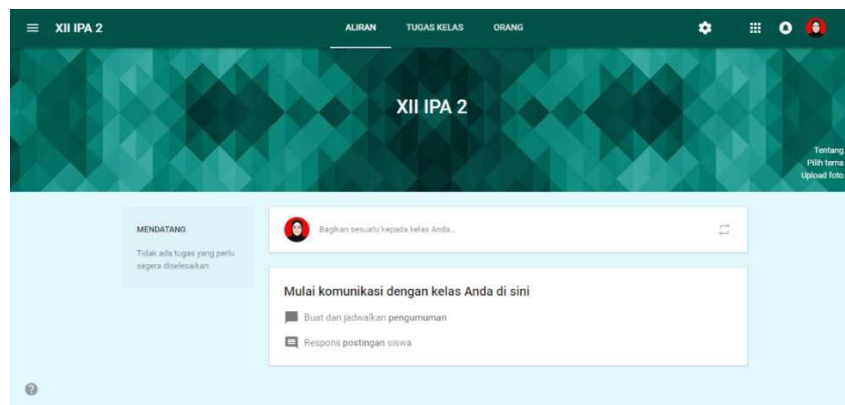


Fig 4. Created class display

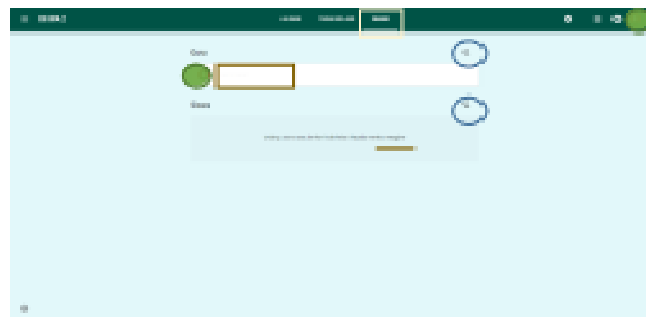


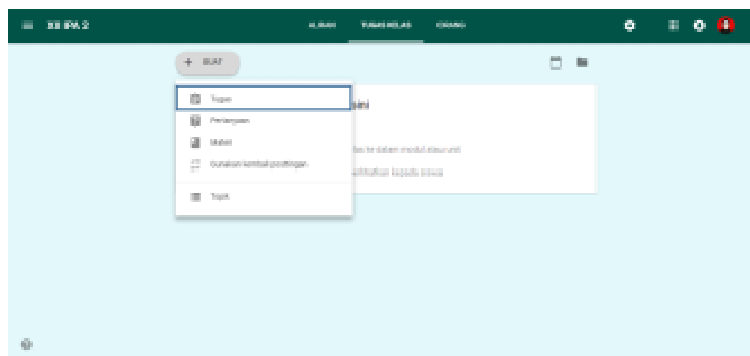
Fig 5. Display to see member in a class

The teachers should give the class code to students, so that students can join in this Google Classroom. Students are required to have a Google Account. Teachers also could manually enter the students Google Account by clicking the + icon. You can also add teachers who teach in the class by clicking the + icon. So, in addition to each teacher could making several classes taught, a teacher also can join in the class he/she teaches. For schools, usually focused on the class. So, in that class, there were only a few subject teachers and students in the class. For campuses/lectures, it is generally

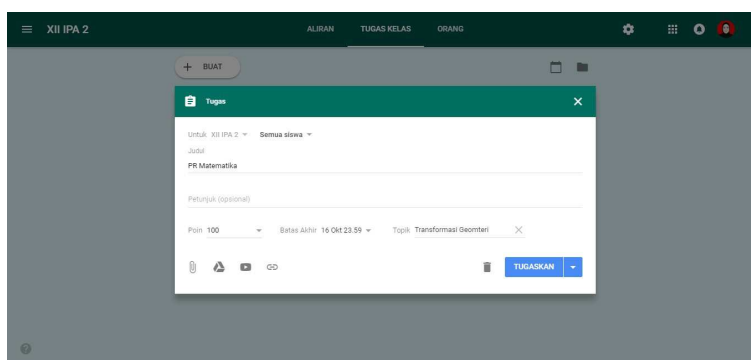
more centered on lecturers/instructors who make classes according to the subjects they teach.

Step 4: How to make assignments, questions, and add teaching subjects (click "TUGAS KELAS" or "CLASSWORK") as in Fig 6(a) and Fig 6(b)

Giving assignments to students can be easier and can save paper when using this Google Classroom because students can directly upload their assignments to each task given by their teacher through the Google Classroom. The teacher who gives the assignment is facilitated because he/she can plan every task he wants to give. Besides, the teacher can post assignments directly through the "Assign" button, the teacher can also post the assignment at any time because there is a "Schedule" option. So, the teacher can directly make several assignments at one time from several subject matter to be delivered, then it can bring up the task according to the schedule. Every assignment can also be given a deadline date of collection and value / maximum score will be given. Fig 7 shows the display after the assignments have been posted by the teacher. This view can be checked in ALIRAN or



(a) Choose "TUGAS"



(b) Apply the assignment

Fig 6. Display how to make assignments

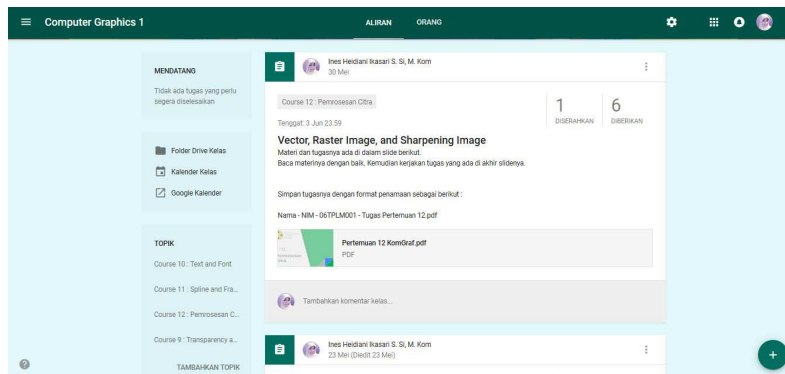


Fig 7. Display of tasks that have been made

STREAM” in each class. In Fig 8, we can see the display for students to do the tasks given. The students could

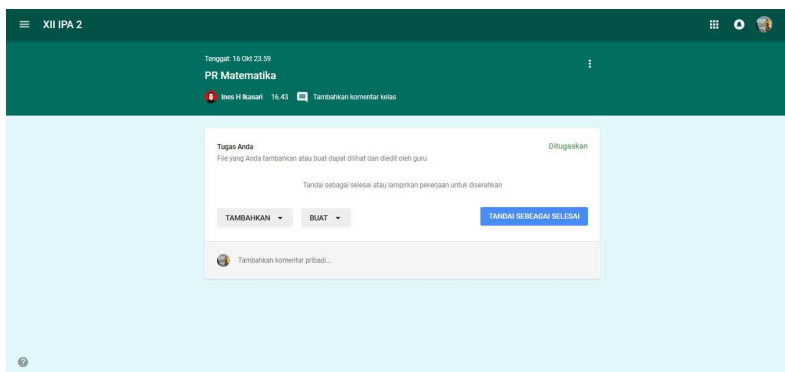


Fig 8. Display for students to do assignments

add answers to the tasks by uploading files, referring to certain links, or from documents on their Google Drive. They can also directly create documents, slides, spreadsheets, or images in the tasks given. After completing the assignment, students must click Mark as Completed to be assessed by the teacher.

Then, after the students have gathered their assignments, the teacher can also give an assess directly to each assignment the students have uploaded in each of their accounts. And the assess that has been given back to the students will be immediately sent and can be checked by each student in his own account. The overall assesses of students can be downloaded by the teacher if they want to calculate their final score. So, it is very easy for teachers to accumulate the final grades of students.

Besides being able to give assignments, the teacher can also provide questions that can be in the form of questions with only short answers, or can also be multiple choice. There is a choice of how students can answer these questions, namely students can reply to answers to other students or students can edit their answers. And there are also options such as in making assignments, that is, teachers can post questions at any time if they have been scheduled in advance. Display to make the question can be seen in Fig 9.

If the teacher only wants to add teaching or course subject, it can be uploaded in the "Subject" column so that the class page will look neater. The subject also can be posted at any time by the teacher, according to the schedule to be determined. Another advantage of this Google Classroom is the integration with Google Docs. So, all uploaded material or documents can be stored directly to teachers Google Docs. So are all grades of students. So, it can be used directly for the accumulation of the final semester grades of students. The calendar display in Fig 10 shows deadlines of existing tasks. Teachers or students can see this calendar to ensure that there are tasks that have a deadline.

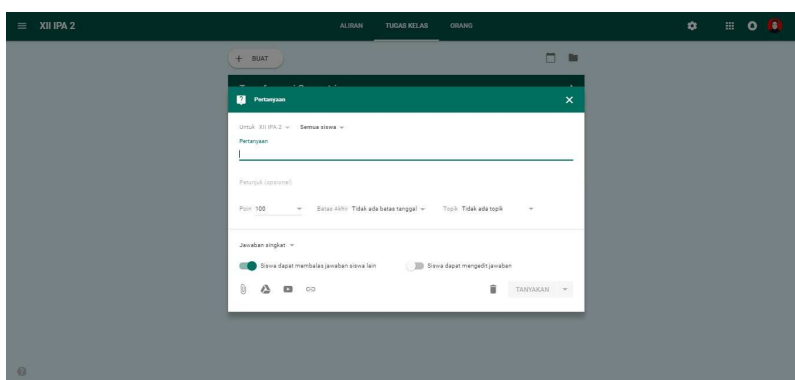


Fig 9. Display how to make questions

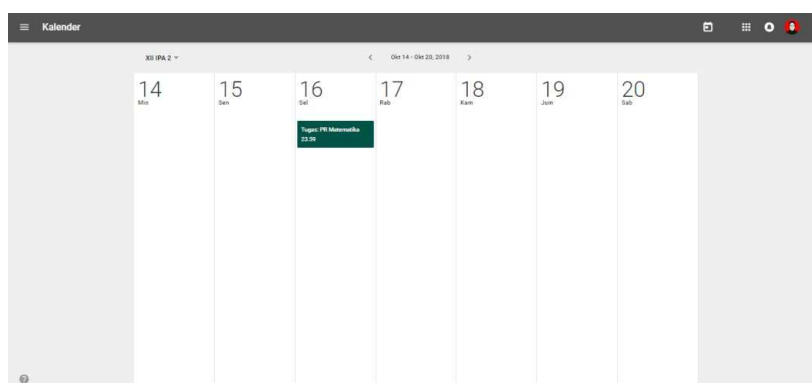


Fig 10. Calendar feature

It is very clear that the Google Classroom feature from Google is very beneficial for teachers in conducting e-learning. However, there are still some limitations from using this feature, such as:

1. If there is a limited Internet connection, the e-learning process with the Google Classroom will be disrupted. Because if you want to do e-learning using Google Classroom, a good Internet connection is needed, so that e-learning can run smoothly.
2. There is no notification system from Google Classroom. Almost all social media give a warning when certain activities occur in our account with a message or ringtone. But Google Classroom makes students unaware of the new assignments given by the teachers, so the teachers should tell them directly.

3. Teachers are also required to have a Google account and remember their password to be able to log in to Google Classroom. For some young teachers this may not be a problem, but for older teachers, it will be difficult to remember or regain access to log in if they are logged out from the Google Classroom.

4. Conclusion

Google Classroom is a useful tool to help schools, especially teachers and students. Google Classroom offers alternative online-based learning that will make it easier for teachers to provide teaching or course subject to students. In addition, the existence of e-learning can monitor the learning activities of each student or each group easily and save the cost of making an online web learning.

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