Go Green Initiative from Google: A Study of Evolution in Teaching and Learning Environment by Google Classroom

Virag Shah[1], Vijay Safaya[2], Jaydeep Desai[3]

[1,3]Assistant Professor, M.S.Patel Department of Civil Engineering, C.S.Patel Institute of Technology, Charotar University of Science and Technology, Changa, Anand, Gujrat, India

[2]Chemical Engineer, M.S.Patel Department of Civil Engineering, C.S.Patel Institute of Technology, Charotar University of Science and Technology, Changa, Anand, Gujrat, India

Abstract— *Google provides Classroom which is a free web-based platform that integrates Google Apps for Education account with all your Google Apps services, including Google Docs, Gmail, and Google Calendar. In its Go Green initiative, Google Classroom saves time and paper, and makes it easy to create classes, distribute assignments, communicate, and stay organized in very effective manner. In present paper many functions of Google Classroom are evaluated.Using Google Classroom Teachers can quickly see who has or hasn't completed the work, and provide direct, real-time feedback and grades right in Google Classroom. From the study we can say that this is the best Go Green Initiative from google via its Google Classroom platform.*
Keywords— *classroom, environment, google, teacher, assignment.*

I. INTRODUCTION

Google for Education (GFE) is a cloud-based system offering online productivity tools for classroom collaboration. GFE provides students and teachers with unlimited cloud storage by means of various google apps such as Google Drive, Docs, Sheets and Slides etc. GFE also provides notifications via email to students and teachers.
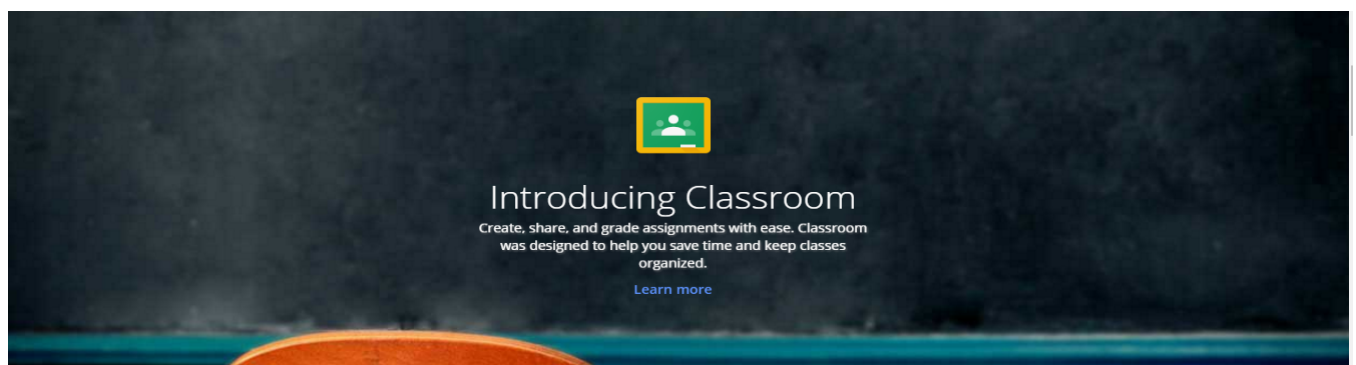

Fig.1: Google Classroom

Fig.2: Google for Education

II. METHODOLOGY: HOW TO USE GOOGLE CLASSROOM

2.1 HOW TO OPEN GOOGLE CLASSROOM?

Open a web browser and go to the https://classroom.google.com/ or click on Google Apps and select google classroom plug-in from the list.

2.2 SIGN IN

Students/Teachers

Enter your Email Credentials as Username and Password. Then Click "Sign in".

III. BENEFITS OF USING GOOGLECLASSROOM

Google Classroom: teachers can post class resources, assignments, announcements and due dates so they are visible to the enrolled class students. In addition to this, even students can post announcements if the teacher enables thatfeature.

Connects to your Google Drive to automatically create and manage folders for each of your classes. Classroom adds all assignments and materials to the appropriate folder or all on its own.

Can be accessed from anywhere online, on any device with google classroom application or a modernbrowser.

Enables real-time teaching-learning for teachers and students. Teachers can view a student's work and students can receive feedback of their submittedwork.

IV. JOIN A CLASS ON GOOGLE CLASSROOM

There are couple of ways to join a class in Google Classroom, but the teacher needs to create a class before students can join the class- room. After creating a google classroom, a teacher will invite students to join the classroom; students will get the notification in the form of email inGmail.

Open your browser and type:https://accounts.google.com/loginand log in with your Email Credentials.

Inside inbox, open the notification email and click the link to join the class.

Another way is to join a class from the invitation page using a Google Classroom enrolment code.

Go to https://classroom.google.com and click the + icon in the upper right corner to create a class/join a class.

Students need to contact concerned teacher for the Google Classroom code which is required to join the class. The class stream will be displayed to the teacher.

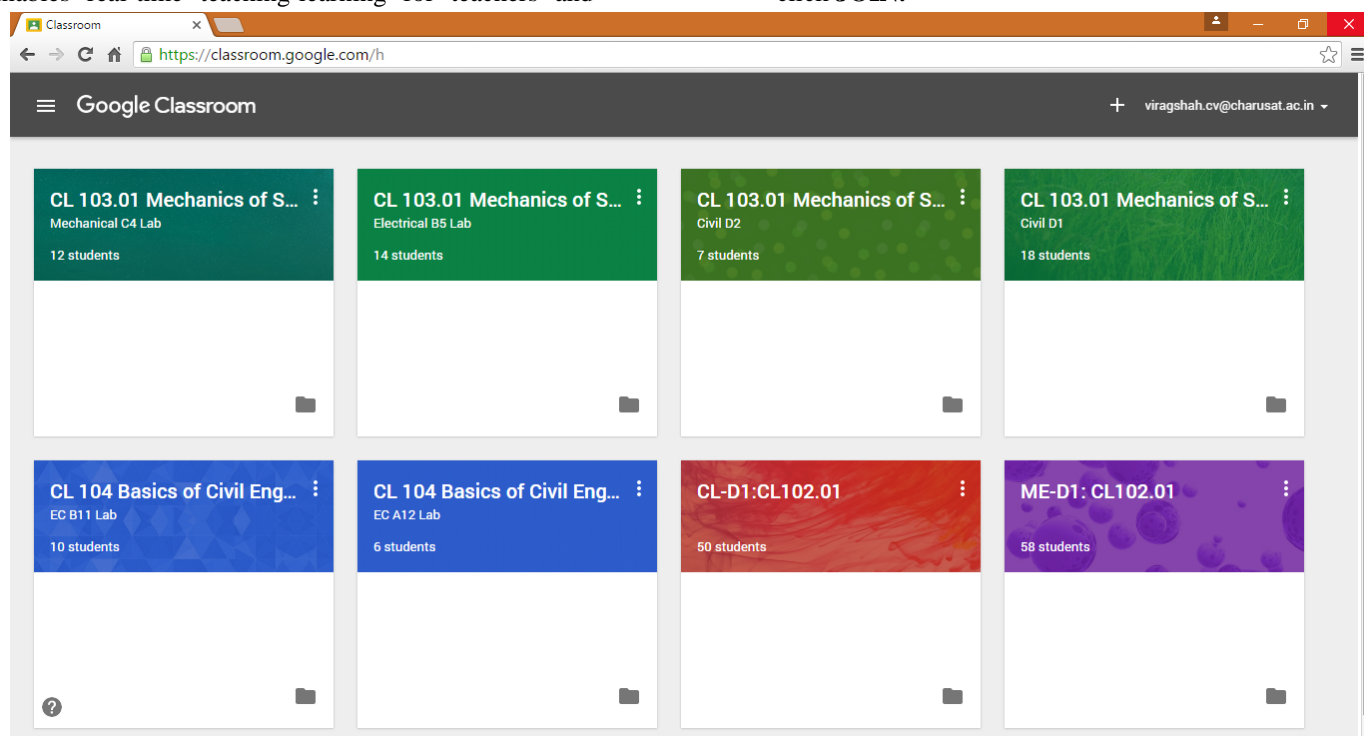At last but not the least, Enter the class code and click **JOIN.**

Fig.3: Join a class in Google Classroom

V. POST TO THE CLASSSTREAM

The teacher can decide about various permissions related to posting for students in the respective class. Students may be allowed to either:

- Post and comment on otherposts

- Only comment on posts the teacher makes,or

- Not allowed to post or comment, only the teachercan.

Go to the class STREAM section. If students have posting permissions, they will be able to click "Share with your class" and postsomething.
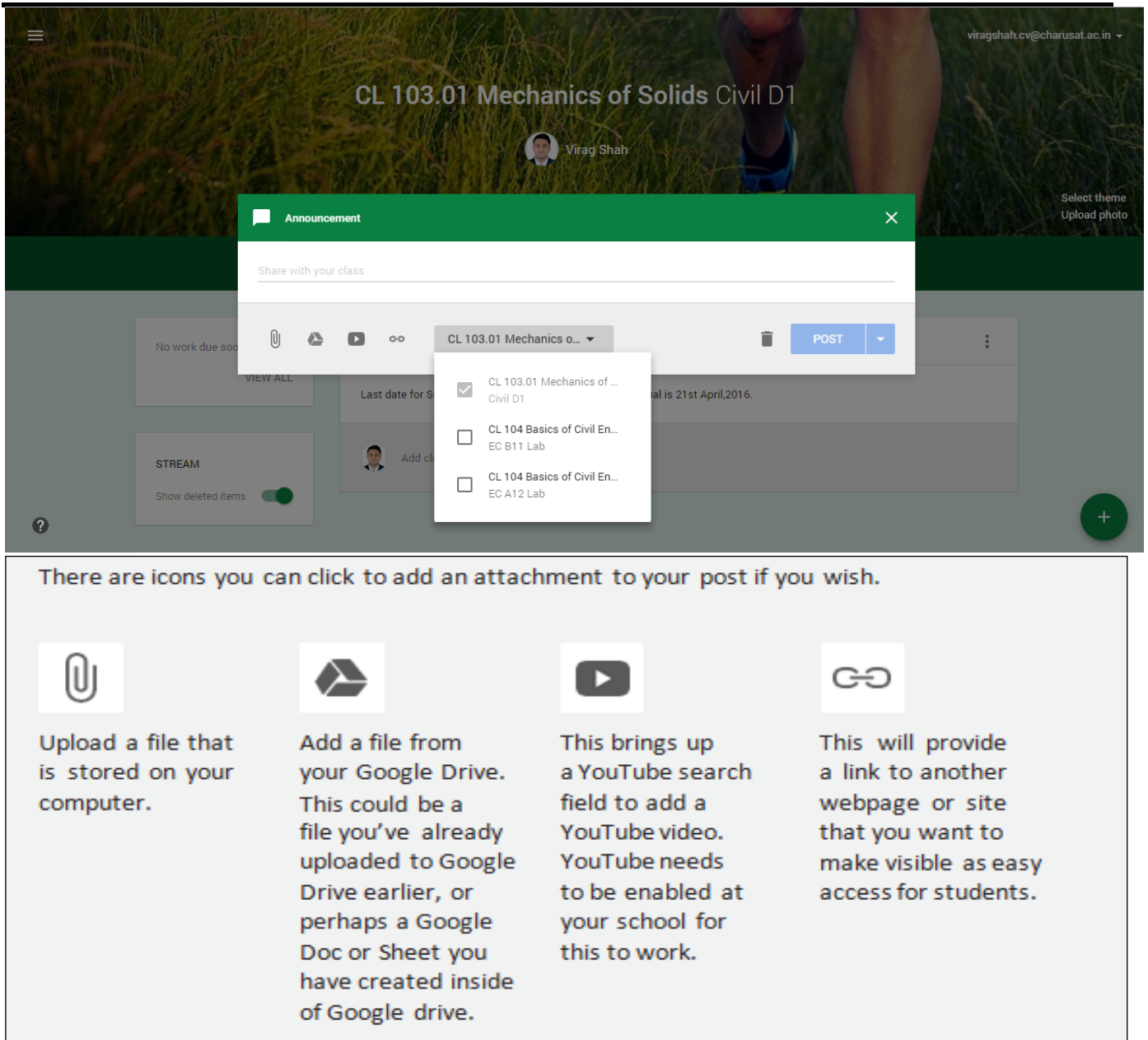
Fig.4: Post to the Class Stream

VI.   VIEW ASSIGNMENTS

Students can view assignments in the class stream section and go on the Assignments page. On the Assignments page, students can sort their assignments by class.

To view assignments for a specific class:
Go to **https://classroom.google.com**and select the class. Select the class. Assignments appear in the STREAM in the order that they wereassigned.
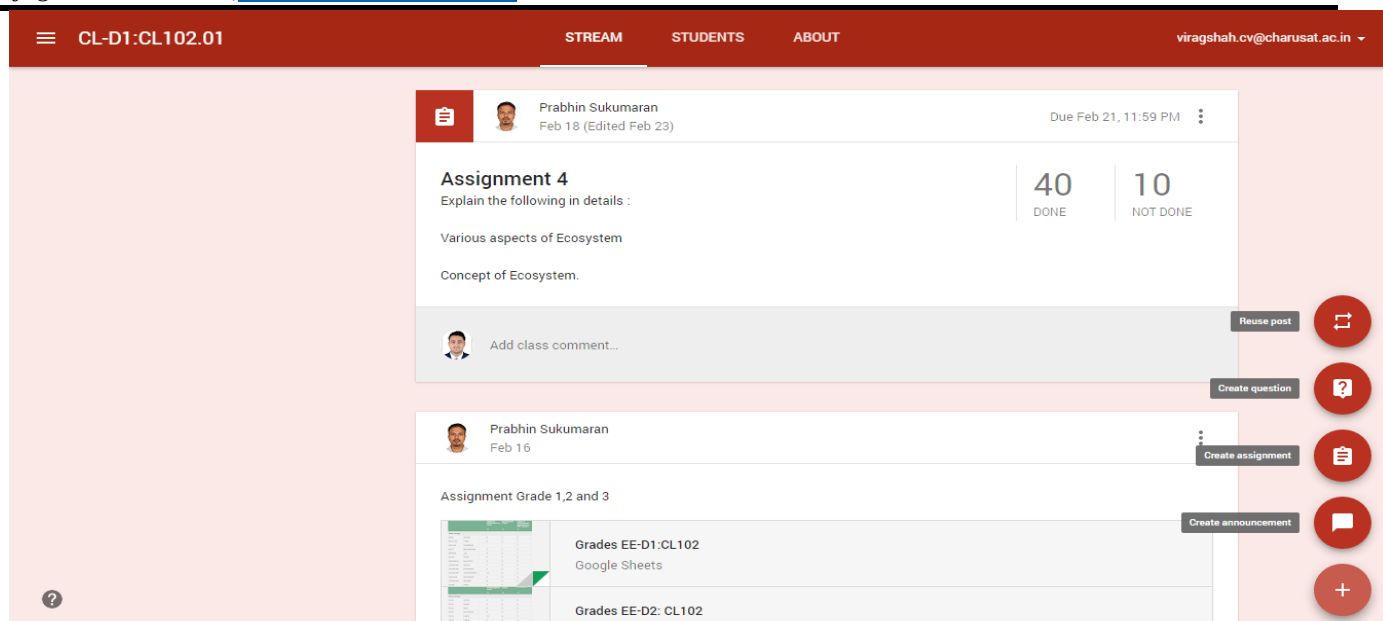
Fig.5: View Assignments

When students select a specific assignment, after selecting students may choose to see the assignment details provided by the teacher or the details of the work submitted so far, including the options to add, create, and turn-in work for the assignment.

Students can also view assignments on the Assignments page

Go to **https://classroom.google.com** and click the menu icon ≡in the upper left corner. TO-DO is automatically selected and the assignments that are due soon are displayed first. Click an assignment to accessit.

Click DONE to see the assignments the students have already submitted. If an assignment is graded, the grade is listed. If the teacher provides feedback in response, students can see the feedback (if any) again by clicking the assignment.

Students can view their assignments by class by clicking

SHOW ALL CLASSES and selecting the class they want to see.

VII.   COMPLETE ANASSIGNMENT

There are two ways you can complete an assignment in Classroom:

- If students need to attach anything to the assignment, follow the steps to turn in anassignment.

- If there are no attachments for the assignment, follow the steps to mark an assignmentdone.

Students can edit an assignment after turning it in. However, any assignment turned in or marked as done after the due date is considered late.
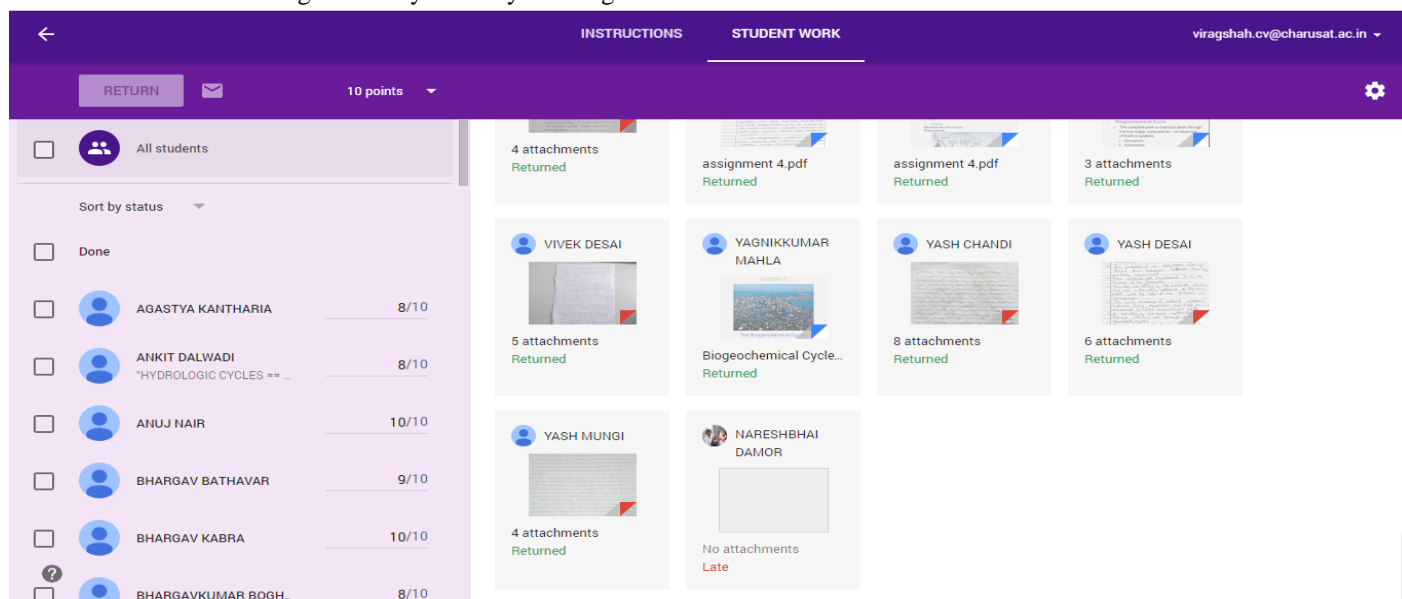

Fig.6: Complete an assignment

VIII.   SUBMIT ANASSIGNMENT

Go to the class **STREAM** and click the assignment, which the students want to turn in. Students can also access their assignments through the Assignments page.

To attach a file from Google Drive or computer, click **ADD** and follow these steps:

- Select **Google Drive** or **Uploadfile**.

- Select the file and click**Add**.

- To attach a link, select Link, enter the link and click **ADDLINK**.

- If student decide that they don't need an attachment, click (**X**) next to it to delete it. To create a new Google Drive item, click **CREATE** and select the filetype.

If students want to add a private comment about the assignment, enter it in the box and click**POST**.

After students upload everything for the assignment, click **TURN IN**.

NOTE: TEACHER MAY VIEW AND EDIT THE FILES UPLOADED BY STUDENTS YOU TURN THEM IN.

IX.   MARK AN ASSIGNMENT DONE

Go to the class STREAM and click the assignment a student wants to mark as done. Then Click **MARK AS DONE**.

X.   EDITING YOUR ASSIGNMENT AFTER SUBMITTING

Go to the class STREAM and click the assignment students want to edit.

Click UNSUBMIT to submit the assignment again and discard the previous submitted assignment. After this process, the status for the submitted assignment will change to "**Not Done**" so make sure students are submitting assignment before the due date!

- Make necessary changes and attach updated documents orlinks.

- If students add an attachment, click TURN IN or MARK AS DONE if there are noattachments.

- Students may add a private note to the teacher if required and click TURN IN or MARK ASDONE.

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XI.   VIEW RETURNEDASSIGNMENT

After a teacher returns an assignment, students can view it on the Assignments page or in the class stream.

To view a returned assignment on the Assignments page:

- Click the Menu icon ≡ and

select**Assignments**.

- Click **DONE** to see the assignments submitted by the students. The grade and any comments from the teacher are listed next to the assignment.

- To sort the assignments by class, click **SHOW ALLCLASSES**.

To view a returned assignment in the class stream:

- Select the class and open the**STREAM**.

- Find the assignment in the class stream and click**OPEN**.

XII.   UN-ENROLL FROM ACLASS

- The teacher can remove students from a class or student can un- enroll from aclass.

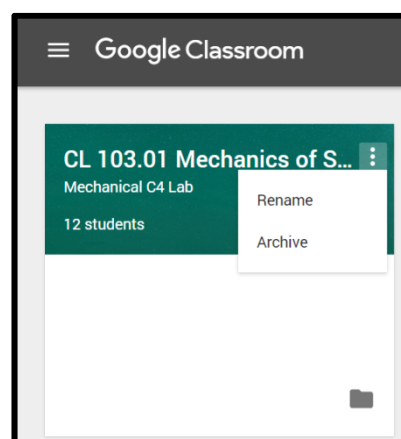- To un-enroll from a class, find the class card, click More Actions (3 vertical dots), and select UNENROLL.

Fig.7: Un-Enroll a class

XIII.   LEARNING OUTCOMES

What is the learning value of Google Classroom in the real classroom? Here are 20 potential outcomes to ponder:1. Grab students' attention; 2. Focus students' concentration; 3. Generate interest in class; 4. Create a sense of anticipation; 5. Energize or relax students for learning exercise; 6. Draw on students' imagination; 7. Improve attitudes toward content and learning; 8. Build a connection with other students and instructor; 9. Increase memory of content; 10. Increase understanding; 11. Foster creativity; 12. Stimulate the flow of ideas; 13. Foster deeper learning; 14. Provide an opportunity for freedom of expression; 15. Serve as a vehicle for collaboration; 16. Inspire and motivate students; 17. Make learning fun; 18. Set an appropriate mood or tone; 19. Decrease anxiety and tension on scary topics; and 20. Ease of submission.

XIV.   CONCLUSION

From the present go green initiative from google: astudy of Evolution in Teaching and Learning Environment by Google Classroom,we can conclude that with Google Classroom, students can join classes in minutes, saving time to focus on learning. Google Classroom brings students and teachers together on a common e- learning platform. Teachers can share learning resources with students, post announcements and assignments for students to complete assignments online in a web browser. Google Classes contain stream for students to collaborate and share ideas with their classmates. Moreover, assignments can also be answered, submitted and stored online. This will save lots of money, time and also our environment towards go green concept.

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