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At a glance

Google Classroom is part of Google Apps for Education and was first introduced to the public on August 12, 2014. According to Google, more than 30 million students, faculty, and administrators around the world use Google Apps for Education. Classroom aims to simplify creating, distributing and grading assignments in a paperless way, giving faculty more time to teach and students more time to learn. It ties many of Google's products together to help organize assignments, provide teacher to student communication and provide storage for students to submit work. Despite Classroom's potential, the absence of several basic features prevents adoption here at Notre Dame. We will continue to monitor Classroom's development and possibly revisit this decision at a later date, depending on the progress of Classroom's feature set.

Who to Contact

If you are interested in discussing what options exist for Google Classroom please contact either <u>Kevin Abbott</u> or <u>Charles Barbour</u> from the Office of Information Technologies (OIT) Teaching & Learning Technologies group.

Usage Scenarios

There are several ways in which Google Classroom has the potential to be useful to both faculty and students:

- Grading Google Docs, Sheets, and Slides could be streamlined for the faculty member and student since it would all be done online including collection of assignments, mark-up, grading, and return.
- After the faculty member invites all students to join the class via email, class folders are automatically set up in Google Drive to simplify file distribution to students.
- Classroom communication could be achieved through a single stream of content, which shows the assignments due, class announcements, and allows for class discussion.
- A "class" could be created for administering various clubs, activities, or projects. For example,
 Classroom could be used to organize a scavenger hunt.

Resources

- Google for Education: Classroom
- 20 Things You Can Do with Google Classroom
- 15 MORE Things You Can Do with Google Classroom
- 10 Tips to Use Google Classroom Effectively
- Understand Google Assignments
- Classroom 101 Video

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Research Team

Kevin Abbott	OIT, Teaching & Learning Technologies
Paul Drake	OIT, IT Service Delivery
Patrick Miller	OIT, Learning Management Solutions
Charles Barbour	OIT, Teaching & Learning Technologies
Jon Crutchfield	Mendoza College of Business
Jeffrey Speaks	Associate Professor, Philosophy
Chris Clark	Concurrent Associate Professional Specialist, Computer Applications Program, College of Arts & Letters

1. What is it?

Google Classroom is an app within Google Apps for Education. It provides some of the features that are similar to ones that you would find in a typical learning management system (LMS). You need to have Google Apps for Education to be able to use Classroom. It's key features are:

- Assignments. A faculty member can create assignments in Google Drive that the student can digitally complete, submit, and have graded all within their own Google Drive class folder.
- Announcements. A faculty member can post announcements that appear in a stream along with other content specific to the course.
- Communication. A stream of content containing assignments and announcements is available to the student for each class, and the student is able to comment on that content stream much like they would comment on a topic on a discussion board.
- Course Materials. A faculty member can post a description about the class, attach files, link to Drive files, YouTube videos, or websites in the "About" area.

2. Who is using it?

As we noted earlier, Google Classroom is restricted to schools with Google Apps for Education. Currently, there are not many universities that have officially made Classroom available to their faculty. As part of our research, we found the following universities listing Classroom as an option for their faculty:

- Michigan State University
- Rutgers University

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3. How does it work?

The faculty member can create a class in Classroom, give it a name and section number, set up class materials and class information in the "About" tab, create an assignment or announcement in the "Stream" tab, and invite students to the class in the "Students" tab. As of this analysis, there is no way to automatically create classes or add or remove students based on enrollment. All class creation and student membership updating is done manually by the professor.

Once a student logs into Classroom, they will see all their classes listed on the home page. Clicking on a class will allow them to automatically access the class' stream, which contains all their assignments and announcements. The "Stream" tab functions as the hub for all communication to the student. To see class information they would click on the "About" tab. To see other students in the class and email them, they would click on the "Classmates" tab. There is a drop down menu at the top left where the student can click on the "Home" menu item to take them back to the home page containing all their classes. They can also use the drop down menu to access all their assignments for classes and see the status of each assignment by clicking on the "To do" tab or the "Done" tab.

A detailed tutorial on how to create and use Classroom is available on YouTube.

4. Why is it significant?

Classroom provides a learning environment built on free and easy-to-use cloud-based tools that both faculty members and students have available as part of Google Apps for Education. The integration of these tools by Classroom enables a single point for a faculty member and student to access course materials, engage in a paperless classroom using Drive, and save homework files for class. It is free, has accessibility built in, has collaborative functionality, and is mobile-friendly.

5. What are the downsides?

Google Classroom is missing some core functionality that is part of a typical LMS today. Classroom only has the ability to post announcements, create assignments, and post a syllabus. Here are some of the missing core features of Classroom:

- **No Gradebook**. You can create assignments and grade them, but there isn't a central gradebook where these grades can reside for each student. You would have to download the grades by assignment and place them into an Excel workbook.
- **No Tests and Quizzes**. There is no way to test or quiz your students.
- **No Discussion Forums**. Classroom does have a way for students to post comments on announcements, but that is not a robust discussion board.

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- **No Lesson Builder**. There is no tool for building sequences of lessons. Classroom does have a way to post materials in the About section, but there is no way to sequence the content.
- No Calendar. Google has not integrated their calendar with Classroom yet.
- No Automated Course Creation or Enrolling of Students. At this time, there is no way to automatically create classes or enroll students from our Banner student information system. For Classroom to be widely used in higher education, this is an important feature.
- **No Way to Connect Other Systems**. There is not an API or a system like LTI for connecting other tools into Classroom, or connecting Classroom into other tools.

This lack of core functionality makes it difficult for a faculty member to teach with Classroom. Google will likely expand Classroom's capabilities over time, but for now, it is missing some core functionality that is necessary for most faculty members.

There are a number of problems and issues we had in working with Classroom. We assume that many of these will eventually be resolved by Google in upcoming releases as they continue to receive feedback from faculty and students. However, some will require re-thinking how instructors normally use an LMS, such as managing roles.

6. What are the implications for teaching and learning?

Google Classroom has the potential to save the faculty member time by enabling a simple way of setting up a class, grading assignments, integration of other Google apps, and communicating with their students. It can be used in both a face-to-face learning environment and a fully online environment enabling the faculty member to explore and leverage flipped instructional methods. The simple interface and single location for receiving a communication stream about class assignments, announcements, and student comments could make Classroom attractive to faculty and students.

7. Where is it going?

According to U.S. News & World Report, 66 of the top 100 universities are using Google Apps for Education. Google is obviously well known in higher education and you will continue to see higher education adopt Google Apps for Education. That means Google has a vested interest to continue its relationship with higher education and its support for Google Classroom.

Google has obliged and has made several improvements to Classroom since it was released in September 2014. They have also developed extensive <u>help documentation</u> and appear to be listening to user feedback. We assume this level of investment will continue by Google and expect more improvements to Classroom in the future.

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At this time, Google Classroom is not designed to compete with the existing LMS products that are prevalent in higher education, like Sakai at Notre Dame. Classroom appears to be situated for the faculty member who is trying to tie together existing Google tools that students already use. However, it is not a replacement for the traditional LMS. With that said, it is important to know that Classroom and the traditional LMS could co-exist at a university. However, at Notre Dame, we feel Classroom lacks too many basic features to be made available as another option to our Sakai LMS.