

Competitive & Inclusive Design Analysis

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1: Slack

A product that relates to our project is Slack. We chose this because it is a platform for students and professors to communicate and share insights with each other about school related topics. Our project has a similar approach on improving the communication and promoting interactivity between students and professors in the context of after-class meetings.

Ways that Slack is effective:

One of the ways Slack is effective is at organizing course conversations into topic-based channels. (Fig. 1) The channel feature is an effective way to allow instructors and students to work together to share, discuss and engage with the course material. If students run into an issue, they can easily make a post under the topic of their interest and wait for the instructor to get back to them. There is also a “Reply to Thread” feature, which lets other students clarify a question of the other student before an instructor does.

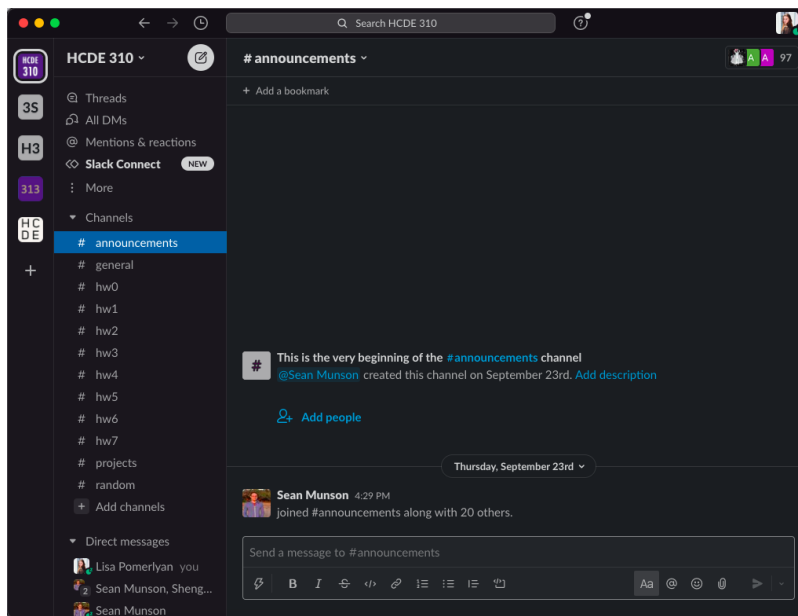


Fig.1 A channel created by an admin with various channels on the left created for each homework assignment

Slack is also effective at enabling audio calls on their platform. (Fig 2) It is easy for users to make calls directly from their channel or direct messaging, making communication quick and

seamless. As useful as sending messages can be, sometimes it is necessary to connect with the person via a call. Especially during a time when in-person communication is not available, people rely on making remote calls from their devices. This way both student and the professor can communicate with each other without having to jump to another app. Slack gives you flexibility with integrating text and audio communication all on the same platform.

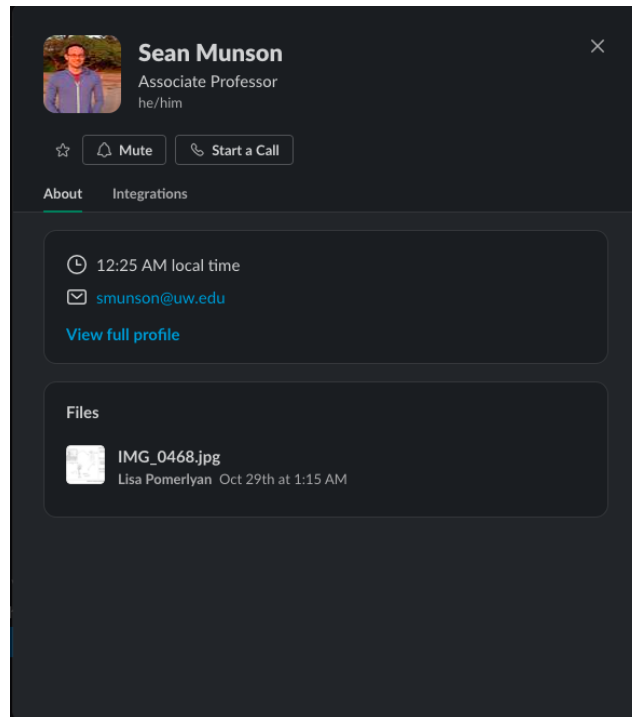


Fig.2 A user profile with a “Start a Call” button which prompts users to request to communicate via a call

Ways in which Slack can be improved:

Slack can be difficult for people who are away for a few days, where important decision and references are lost for them in the thread of many messages. Many people encounter an overwhelming number of messages and consider this to be inconvenient to go through all missed conversations just to find the ones that need immediate attention, unless the user goes through all of them. Because of this, Slack users would need to rely on other forms of communication where they can fill themselves on the missed information. This constricts the main goal of Slack of making communication easier for users and having it all in one place. One way it could be fixed is to give users the ability to mark their messages as important, and it will be moved to a separate thread of ‘important’ messages.

Every time a user receives a notification, it is like someone coming into your study space and interrupting you. It gives a sudden urge to respond to the message, or at least read it. According to the Microsoft study, it takes at least 25 minutes to immerse yourself back into the work you had been doing and remove the distraction completely. [2] Slack can overcome this issue by integrating notifications with your calendar schedule. In that case, users do not need to do a multistep process to disable their notifications whenever they get busy. This new implementation feature would block the notifications when you are in an important meeting, joining office hours, or teaching in class.

Commentary on Inclusive Design in Slack:

The notification system in Slack relies on displaying message previews on the desktop. This in turn can affect people with invisible disorders, such as anxiety-disorder. The notifying system overstimulates the nervous system and can make people suffering from these disorders think that everything needs their attention and needs to be addressed right away. This constant iteration cycle demands a lot of attention throughout the day, which can get in between of work/study schedule. People might be hesitant to turn off the notifications because of fear that they might miss something from their boss or an important decision. To account for these users, the platform can implement a feature mentioned previously, where users can connect to their calendar and set-up private times to block off any pop-ups from the notification system. This way they would not need to constantly think about turning off their notifications and only focus on their work.

2: Canvas

A product that relates to our project is Canvas. We chose this product because it is a platform for students and professors to communicate with one another on course-related topics. Our project is also focused on improving the communication between students and faculty outside the classroom, especially as everyone is transitioning back to in-person classes. During the transition to in-person classes, it is a period where students may have concerns about the format of a class and whether the professor adjusts their course around students' needs/those who want hybrid options.

Ways that Canvas is effective:

One way that Canvas is effective in its goals is that it includes an “Announcements” page for each course (Fig. 1). The “Announcements” page is a feature that allows professors to post announcements directed to sections in the class. If students turn on the notifications option, they can be notified via email when a professor makes an announcement. There is also a “reply” option for each announcement, giving students the option to respond back to the professor.

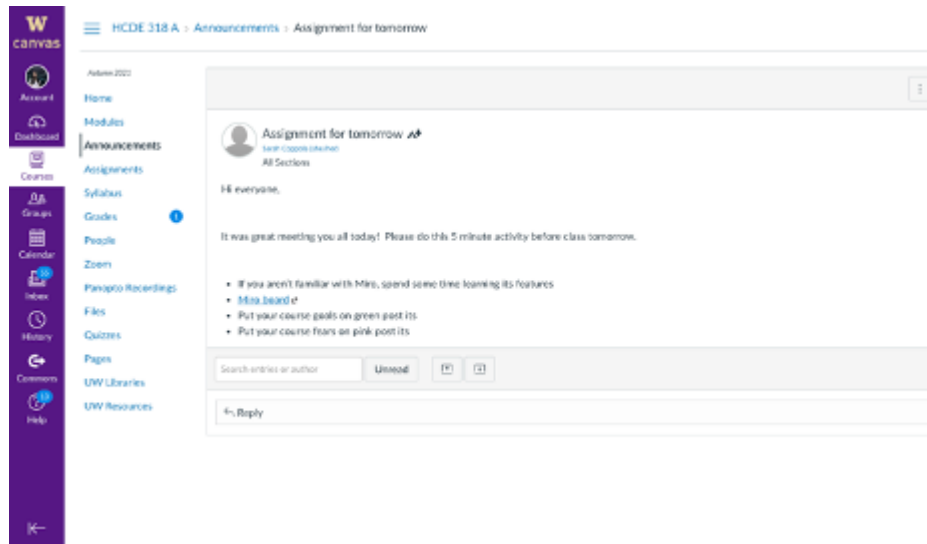


Fig. 1. A post created by an instructor using the “Announcements” feature.

Another way that Canvas is effective in its goals is that it includes a “Discussions” page for courses. One of my courses has a “Frequently Asked Course Questions” discussions page, and students have responded to the thread with questions about the course. Both students and professors can respond to the questions, which can be an effective way of gaining diverse responses to students’ questions.

A third way that Canvas is effective in its goals is that it has an “Inbox” feature. Students can compose a message and send it to specific students and/or instructors (Fig. 2). This gives students and instructors the option to message others in a more private setting.

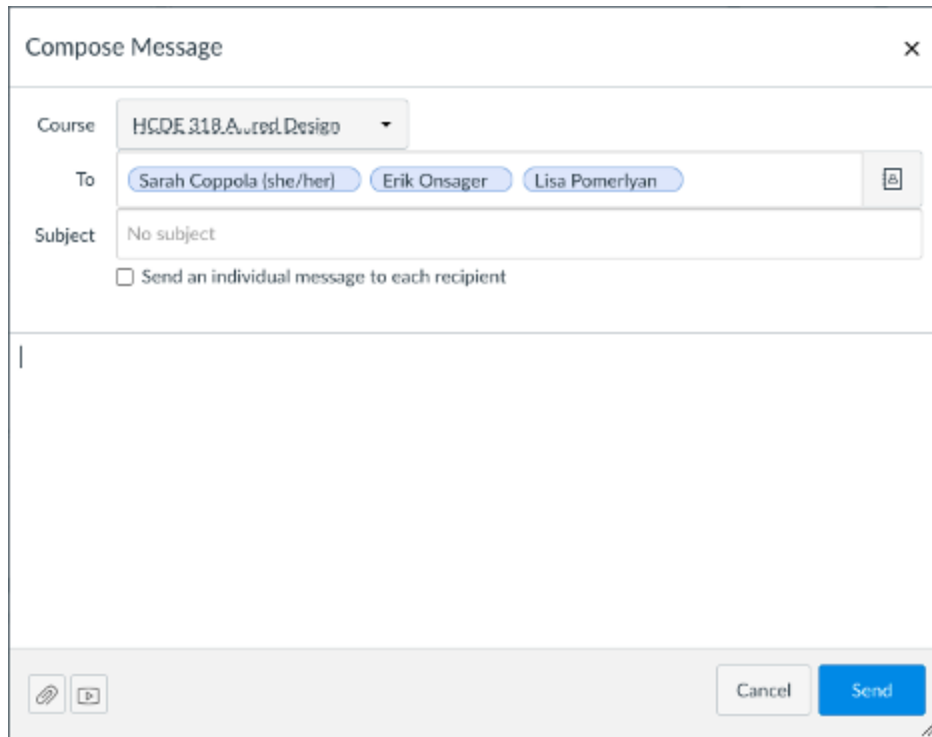


Fig. 2. A message being composed to an instructor and two students through the “Inbox” feature.

Improvements that can be made for Canvas:

For the “Announcements” feature, although it gives students the option to reply to the announcements, among the 4 courses I am taking this quarter, no students have replied to any of the announcements. This demonstrates that this feature is more often used as a form of one-way communication. This could be because the content of the announcements themselves are self-conclusive and there isn’t much for students to add onto the conversation. Because of this, Canvas would need to rely more on the improvements of the “Discussions” and “Inbox” features for two-way communication.

The “Discussions” page can be improved by allowing students to create separate, private pages with instructors. I noticed that in the “Frequently Asked Course Questions” discussions thread mentioned earlier with all the sections (a total of about 200 students), only 4 questions were asked in total. This could be because students feel intimidated to ask questions when it can be seen by the rest of the class. Allowing students to create a separate discussions page with instructors could help with making them feel more comfortable asking questions.

The “Inbox” feature can be improved by changing its format. The current format is very similar to emails, where messages are often sent in a more formal context. Because of this, students

may hesitate to reach out to instructors about concerns that aren't significantly urgent. Many of my peers have also stated that they often don't check their inbox on Canvas. Changing the format to a text messaging format and sending notifications to users when they receive a message could increase user activity for the "Inbox" feature.

Commentary on Canvas' Inclusive Design:

The "Calendar" feature on Canvas relies on color coding in order to differentiate the classes on the calendar (Fig. 3). For users that are color-blind, this could be inconvenient for them to navigate through the calendar when quickly looking for assignments for certain courses. Although it can be argued that color-blind users could isolate certain classes by selecting only one of the courses to view on the calendar, they won't be able to compare their assignments and view the full schedule with all their classes. In order to differentiate the classes when viewing all of them at once on the calendar, they would have to manually select each calendar entry in order to see the description (which includes information on which class the assignment is for).

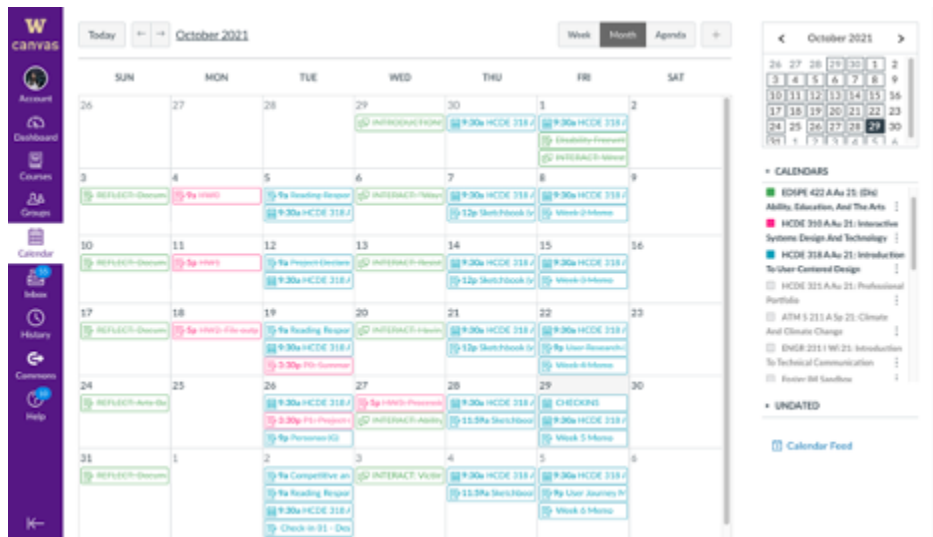


Fig. 3. The "Calendar" feature on Canvas.

3: Google Forms

Google Forms is one of the most commonly used tools by UW teachers to receive feedback outside of official end-of-term course evaluations. It's created by Google - a trusted company that many are already familiar with due to UW-IT's implementation of the Google Workplace for Education. It's also visually pleasing, accessible, and easy to use for the

non-tech-savvy. Because of this, it both relates to and is a strong contender for our group's project as a method of communication between professors and students.

Ways in which Google Forms is effective:

Google Forms is very easy to use. One of the things that makes it so popular is that creating and filling out forms is intuitive, even if the user doesn't have experience with the product. When making a survey for the first time, a tutorial walks the user through the process of customizing questions and viewing response data. As well as this, it's easy to import questions between forms if a teacher wants to use the same survey multiple times.

Google Forms also has 5 templates specifically made for education, streamlining the process for teachers even more. Whether it's an exit ticket or course assessment, it only takes a few minutes to have a fully functioning form ready to be sent out to students. These templates are also very customizable, with many options for questions based on the intended purpose of the form.

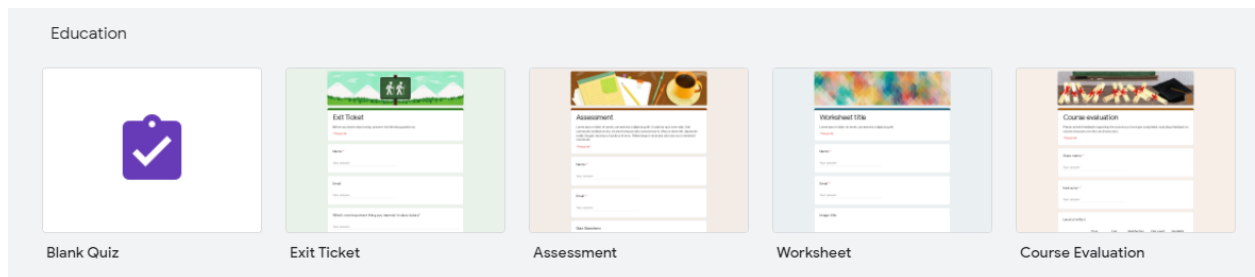


Figure 1: Premade templates for Google Forms

Finally, Google Forms automatically generates visualization for forms as responses are received. This makes it easy for the creator of a form to view the distribution of responses when there is lots of data involved, as hundreds of responses can be consolidated into a single chart. As such, Google Forms is effective with both small and large populations, and in the case of our project, could be used for classes of any size.

Please rate your satisfaction with the course contents

6 responses

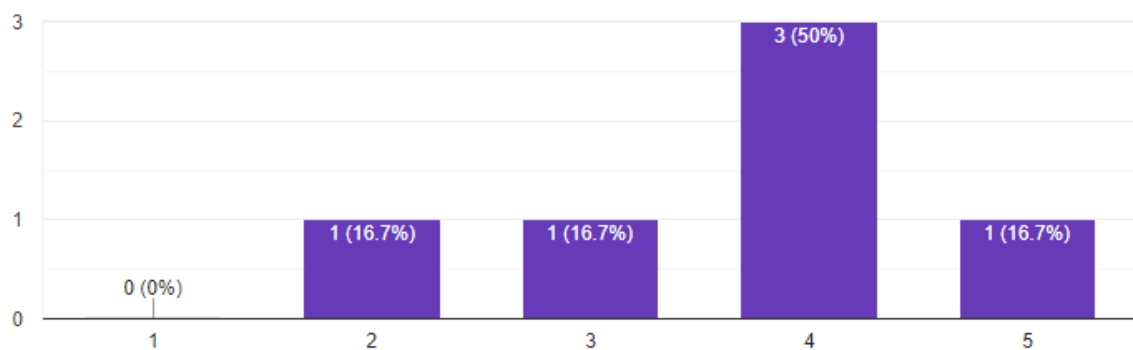


Figure 2: Chart automatically generated from Google Forms responses

Ways in which Google Forms could be improved:

By unchecking a setting that collects email addresses, the respondents to a Google form can be made anonymous. However, if a form requires a file upload, the user still needs to sign in to their Google account to fill it out. Moreover, forms created inside a Google Workplace will require the respondent to be signed in regardless of whether their email is collected by the survey creator. Though the respondent still remains anonymous if their email is not being collected, this can still discourage respondents from complete, unfiltered honesty and can block them from uploading specific evidence/examples in certain cases.

As well as this, though responses can be exported to Google Sheets, new users may struggle to compare data between identical surveys and generate visualizations of trends over time. This is because Google Sheets has much more functionalities available to the user, and those lacking experience with it may find the process of organizing data and creating graphs to be both daunting and frustrating.

Inclusive design in Google Forms:

Google Forms does a very good job with its accessibility features. It is compatible with screen readers, braille displays, screen magnifiers, voice commands, touch input, and keyboard shortcuts [3]. Moreover, these features maintain high functionality across a plethora of platforms and browsers. There are a few places where Google Forms doesn't fully support certain accessibility features, such as the use of color, name/role/value, contrast, and focus order [4], but overall it is still highly accessible and doesn't have any cases where it truly fails in terms of accessibility.

Sources:

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