



# **NEW ADDITIONS FOR SLACK MOBILE**

New features aimed at adult student users

**MAKI HIROSE**

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## **Executive summary:**

The product team at Slack is looking to get into the adult education space. While communication needs of students have parallels with those of corporate users, Slack believes there are likely many needs specific to adult students in particular. Slack is looking to have new features integrated into their existing mobile app, targeting adult students.

From the insights we gained, the following is a recommendation of new features to implement in Slack's mobile app:

- Incorporate video chat capability.
- Incorporate a task manager to help teams stay organized.
- Incorporate a notifications button on main chat page so that adult students can change notification settings quickly and easily.

## Background:

The product team at Slack is looking to get into the adult education space. Slack is looking to have new features integrated into their existing mobile app, targeting adult students.

## Hypothesis:

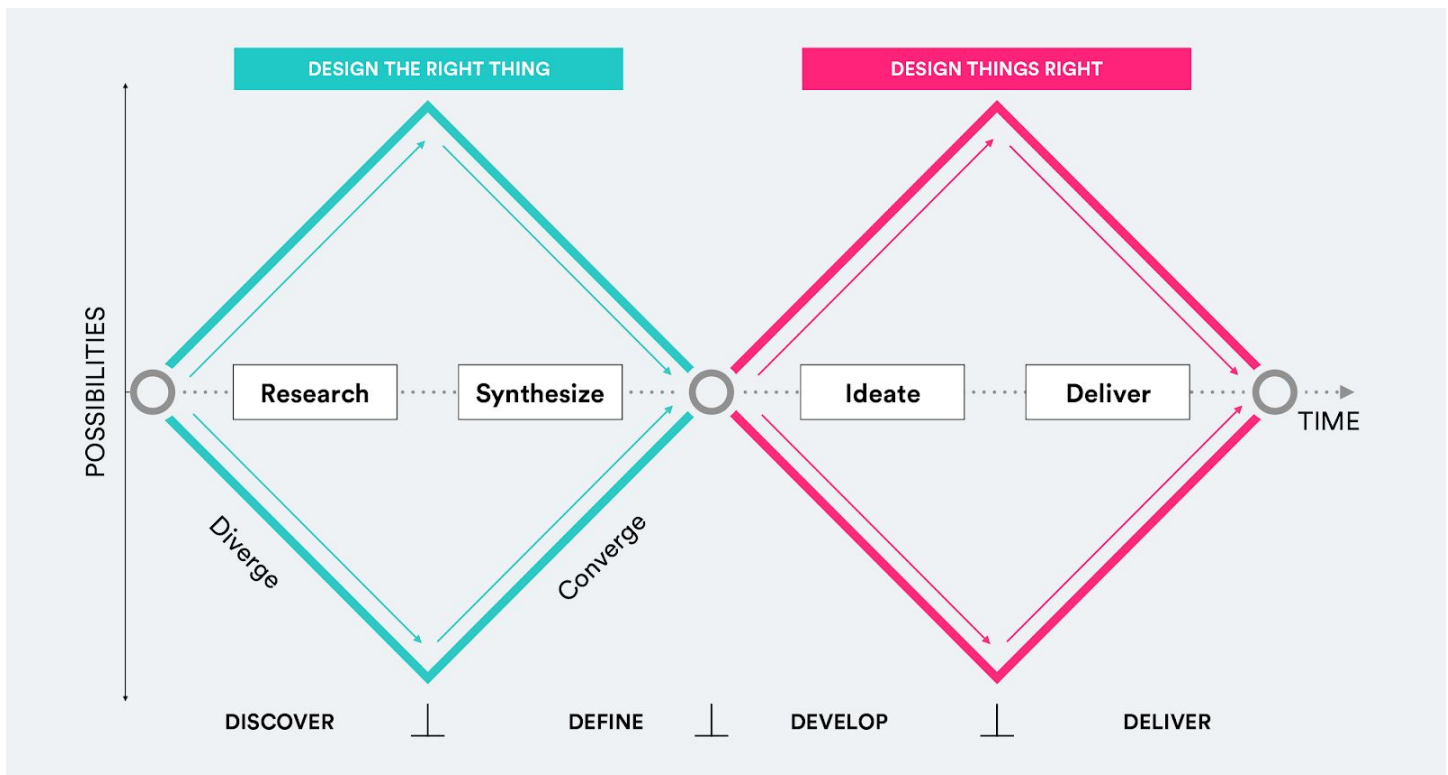
While communication needs of students have parallels with those of corporate users, Slack believes there are likely many needs specific to adult students in particular.

## Problem statement:

How might we provide adult students a tailored mobile app to help with their studies and collaborative group projects?

## The Double Diamond Process:

This process was used to conduct the contextual inquiry and prototyping for this project.



## **Discussion guide (questions users were asked):**

For the contextual inquiry, these were the questions asked to the user:

- How old are you?
- What is your current location?
- At what school were you an adult student at?
- What did you study there?
- How long have you been a Slack user for?
- What desktop programs and mobile apps do you use as an adult student?
- Were any of those used on a mobile app as well?
- During a recent group project, what were the various ways you communicated with your team-members?
- Was it a nuisance or frustrating to use multiple desktop programs and mobile apps to communicate and collaborate with your team members?
- Did you collaborate on the project in-person or remotely?
- How many people were in the group?
- How did you communicate / share information / collaborate while working on the project?
- Can you tell us about your collaboration process that worked?
- What were the pain points and frustrations that you encountered while working together?
- Do you have pain points specifically with Slack's mobile app?
- Have you had communication problems with team mates on the last project?

# Interview transcripts:

## Participants:

Kamal

Chris

Ranson

Rawan

Corey

Allison

Anthony

## Gender:

K: Male

C: Male

R: Male

R: Female

C: Male

A: Female

A: Male

## How old are you?

K: 52 years

C: 35 years

R:

R: 30 years

C: 30 years

A: 29 years

A: 44 years

## What is your current location?

K: New York City

C: New York City

R:

R: New Jersey

C:

A: New York City

A: New York City

**At what school were you an adult student at?**

K: Columbia University

C: Columbia University

R: General Assembly NY

R: General Assembly NY

C: General Assembly NY

A: Columbia University

A: Columbia University

**What did you study there?**

K: Full Stack Web Development

C: Full Stack Web Development

R: User Experience Design

R: User Experience Design

C: Full Stack Web Development

A: Full Stack Web Development

A: Full Stack Web Development

**How long have you been a Slack user for?**

K: 8 months

C: 8 months

R:

R: 9 weeks

C:

A: 8 months

A: 8 months

**What desktop programs and mobile apps do you use as an adult student?**

K: Slack, GitHub, Git Lab, Basecamp.

C: Slack, Zoom.

R: Otter for audio recording, Slack, Zoom or Skype for interviews, Trello for task management.

R: Sketch, Notepad app, Slack for communication, WhatsApp for texting, Skype for video calling, Calendar app, Medium to write articles, Gmail, Google Docs.

C: Atom io, Slack, Command line.

A: Slack, Visual Studio Code, Sequel Pro, MAMP, Keynote, Quicktime Player, Terminal, Google Drive.

A: Visual Studio Code, Robo 3T, MAMP Pro, Postman, Sequel Pro, Heroku, Gmail.

**Were any of those used on a mobile device as well?**

K: Only Slack. It was very easy for me to get notifications and check immediately.

C: Only Slack.

R: Have used all of the above except Trello on mobile.

R: Gmail, What'sApp, Slack, Skype.

C: Slack.

A: Slack, Google Drive. GitHub and Git Lab were accessed via Safari on mobile.

A: Slack.

**During a recent group project, what were the various ways you communicated with your team-members?**

K: Slack direct messaging. Sometimes cell phone calls and email.

C: Slack for communication. Zoom for virtual meetings.

R: Slack was the main medium for communication for group projects.

R: What'sApp for personal communication (even if it's a classmate) such as when inviting to go for a smoke. Slack for anything related to a project.

C: Facebook messenger and Zoom.

A: Slack, Zoom, Skype.

A: Slack - direct messaging or group chats (text based). We shared files, code, pictures through Slack.

**Was it a nuisance or frustrating to use multiple desktop programs and mobile apps to communicate and collaborate with your team members?**

K: Hard to get a hold of people. They may not check Slack everyday or people may not log into their email every half an hour.

C: There was a hindrance when my group would start a Zoom meeting, because they weren't sure who was going to post the [Zoom meeting] link in Slack, so they would wait to see if somebody was going to join or not going to join. If that were a native feature in Slack, that would have certainly made it easier.

R: Slack was used mainly on the computer rather than on a mobile phone. No frustrations using multiple different apps because I was able to separate different apps for different purposes (set different tones for different channels, professional vs casual). Slack was convenient to share files.

R: Not Annoyed by multiple things at the same time because I could turn off certain applications. If I didn't want to talk to my family I would turn off WhatsApp.

C: Facebook messenger was a mess.

A: We primarily used Slack to communicate.

A: No, it seemed pretty seamless.



### **Did you collaborate on the project in-person or remotely?**

K: Both, but we couldn't meet up outside of school so remote work was done via Slack.

C:

R: In person collaboration for the most part during weekdays. On weekends we used Slack Desktop's video chat and screen sharing features.

R: Have a call on Slack. Some groups had a cutoff time of 6pm, then they would communicate via Slack from home.

C: Remotely.

A: I met up with one other person a lot outside of class. Towards the end of the project when time was running out we used Skype.

A: We used both Slack and in-person collaboration. More time was spent working remotely and collaborating via Slack (than in-person).

### **How many people were in the group?**

K: 8 people

C: 8 people

R: 4 people

R:

C: 4 people

A: 6 people

A: 5 people

### **How did you communicate / share information / collaborate while working on the project?**

K: Mostly shared information via Slack.

C: Slack, Google Drive.

R: Over the weekend we would communicate as a group over video chat (Zoom, Slack, or Skype.) Everyone was pretty democratic and professional.

R:

C:

A: Mostly used Slack to share code snippets, and we saw changes as they were made on GitHub. We used Canva to sketch out the web app's layout at the start of the project.

A: When people's time schedules coincided, it was all about sending out messages, receiving information and then working.

### **Can you tell us about your collaboration process that worked?**

K: The team gave each other an opportunity to work on every aspect of the full stack development: front end and back end.

C: Created a Slack channel unique to the group working together.

R: We used Google Drive to collaborate and make changes in real time.

R: We created a Google Drive folder, then subfolders with the different phases.

Communicated/collaborated via Slack.

C: Google files, Github.

A: Slack was the best platform for us to communicate together.

A:

### **What were the pain points and frustrations that you encountered while working together?**

K: People not delivering things on time, People not pulling their weight so others taking on other people's work. Making people accountable. Time management and scheduling.

C: If the group wasn't working together in the same room, there was fear that people would be working on the same thing--double working.

R: It was a huge pain to keep sending updated files of Sketch or InVision via Slack rather than working on the same file at the same time in the cloud using Figma.

R: Annoyed by default DO NOT DISTURB feature in Slack that turned on at night. Team mates wouldn't be aware this was on and wouldn't get important Slack notifications.

C: Not being able to share files easily especially larger files. Not being able to interact with files such as drawings.

A: It was not organized and there was not enough communication. The work was not divided evenly and so a lot of work fell onto just a few people within the group. We should have planned it better and that would have saved us time from having to go back and redo things. Some people weren't able to get their code into the project. People had a lot of things going on in their personal life.

A: Since it's just one stream of info on Slack, the communication can get boggled. People would jump in on topics posted 4 messages before. Organization of topics always got muddled because members of the group were posting their communication to just one channel.

### **Do you have pain points specifically with Slack's mobile app?**

K: Didn't run into issues on Slack's mobile app for what we used it for, which was checking to see the latest posting. I also used the video chat feature in Slack on my desktop.

C: Didn't have a specific issue with Slack's mobile app. I used desktop more often.

R: Used slack mobile mostly for sending messages.

R:

C: I haven't used it much on my phone yet.

A: The pain points were the group notifications: If we messaged the group, the group wasn't notified and we had to specifically tag individual people in order to notify them.

A: It seems intuitive and user friendly.

### **Have you had communication problems with team mates on the last project?**

K: Getting everyone's full dedication. A common problem that occurred among those who either had some family commitment or had some professional commitment, in which case they couldn't respond in a timely manner.

C: Lack of transparency. Unsure if the other team members were working on the project or not.

R: No pain points with communication.

R: Teammates were used to different apps from the ones I typically used. I used What'sApp a lot, but my teammates were used to iMessage.

C: No issues with communication.

A: Organization was a problem.

A: A frustration for the level of understanding of a topic that was being discussed by different team members on Slack. This was due to so many different topics being addressed all in the same channel.

### **Additional comments from interview conversation.**

K: People preferred things to be documented like in a job setting.

C:

R:

R : I am a heavy user of the notes app. At the start of the day I create a to-do list with checkboxes.

C:

A:

A:

## User interview quotes:

Kamal: “With group work, people were not delivering things on time. People were not pulling their weight so others had to take other [group member’s] work.”

Allison: “Organization was a problem.”

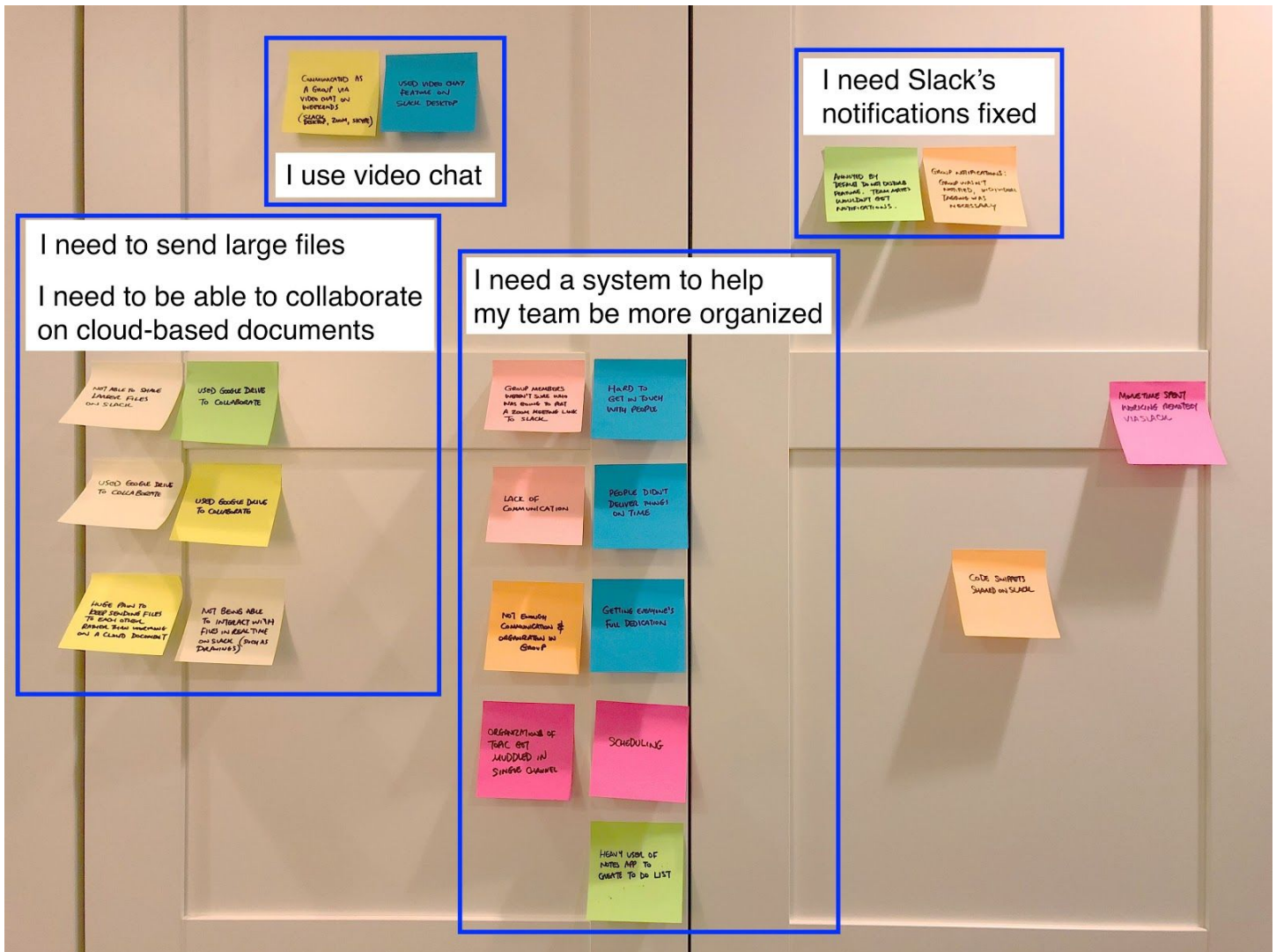
# Insights:

These are the insights gained from the user interviews.



# Affinity mapping with “I” statements:

The insights were reorganized using an affinity map technique and each grouping was reworded using “I” statements.



## Synthesizing insights from interviews:

- Adult students want to be able to share large files.
- Adult students like using cloud based documents.
- Adult students like using video chat.
- Adult students need a system to help their team be organized.
- Adult students don't like the default notification settings for channels. This needs to be addressed and fixed.

## Feasible solutions:

- Incorporate video chat capability. This is currently not available on Slack's mobile app.
- Incorporate a task manager to help teams stay organized. The task manager is a cloud based solution.
- Incorporate a notifications button on main chat page so that adult students can change notification settings quickly and easily.

## Insights that are not feasible for the time being:

- Adult students want to be able to share large files.
  - [There is likely a bandwidth limitation on the server to implement sharing of large files.](#)



## User persona 1:



### ***Zachary***

**Age:** 30

**Gender:** Male

**Location:** New York City

A former accountant who wants to take advantage of a changing market.

#### **Scenario & Behaviors:**

Zachary has just started a Full Stack Web Development course and is feeling overwhelmed. In addition to the heavy coursework, he needs to familiarize himself with new technology and apps. He has a wife and child.

#### **Goals:**

He wishes to become a Full Stack Web Developer.

#### **Pain Points / Frustrations:**

He finds it frustrating working on group projects at the course because no one on his team is organized.

#### **Needs:**

He needs a system within Slack to help his team stay organized with additional tools to make collaboration easier.



## User persona 2:



### ***Nastaran***

**Age:** 33

**Gender:** Female

**Location:** London

A former Journalist who wants to change careers and work in the tech industry.

#### **Scenario:**

Nastaran is half way through a UX Design course and she is working on a group project with three other people. With everyone in her group having different schedules, the group must find a time that works for everyone to collaborate remotely.

#### **Goals:**

She wishes to become a UX Designer.

#### **Pain Points & Needs:**

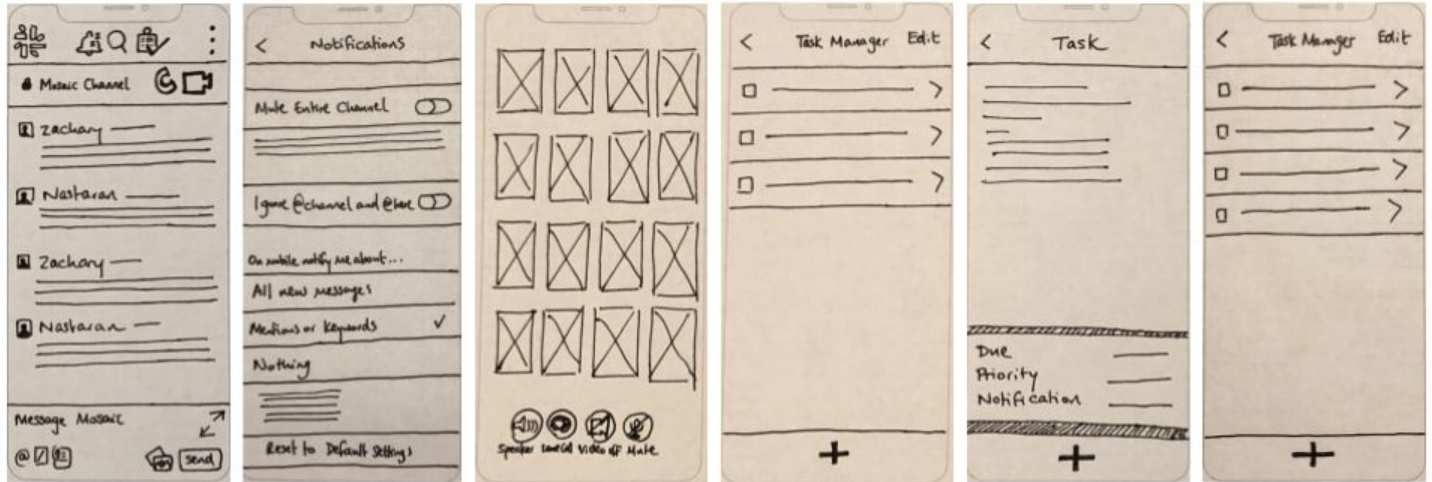
She finds Slack's default notification setting to be annoying. She needs a way to be able to quickly access the notification settings.

The image shows several hand-drawn sketches of mobile application screens for a task manager. The sketches are on white paper with blue and black ink.

- Top Left:** A list view titled "Task Manager". It contains a list of tasks, each with a checkbox, a name (e.g., "Zachary", "Washington"), and a status (e.g., "Message Zachary"). There are also some small icons at the bottom.
- Top Right:** A "Task Manager Edit" screen showing a list of tasks with checkboxes and names. A plus sign is at the bottom.
- Middle Right:** A "Task" detail screen showing a task name, a "Due" date, and a "Priority" level. There is a plus sign at the bottom.
- Bottom Left:** A call control interface with a series of icons: a speaker, a phone handset, a video camera, and a mute icon. Below these icons are the labels "Speaker", "Leave Call", "Video off", and "Mute".
- Bottom Center:** A large, faint sketch of a screen with a grid of icons, possibly a home screen or a settings menu.
- Bottom Right:** A screen with a grid of icons, similar to the one in the bottom center, but with a plus sign at the bottom.

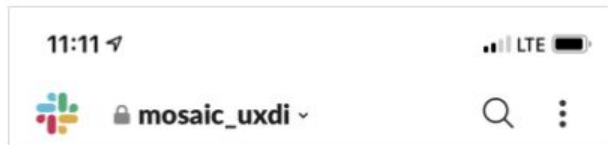
A blue pen is resting diagonally across the bottom center of the sketches.

# Paper prototype:



## Changes to main page top navigation:

Current page-top navigation:

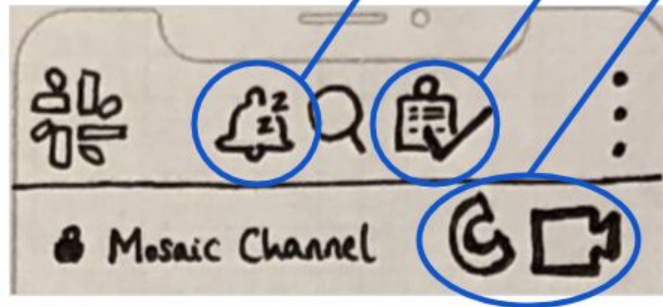


Addition of notifications button.

Addition of task manager button.

Proposed new page-top navigation:

Reorganized navigation, split over 2 lines.



Addition of voice call and video chat buttons.

Currently, voice calling is only available for direct messages and not channels on Slack Mobile.

Video calling is neither available in direct messages nor channels on Slack Mobile.

## **Paper prototype usability testing target audience:**

Adult students.

## **Paper prototype usability testing discussion guide (questions users were asked):**

- Hello and short self introduction.
- Explain to user that Slack is implementing new features aimed at adult students.
- Ask the user if they have any initial thoughts about what they see and to talk out loud throughout the user test.
- Tell user a scenario where they are working on a group project and need to connect with each other on the weekend remotely.
- Ask the user how they might set up a visual conference call.
- Ask the user to exit the call.
- Tell the user that after the call, they want to note down a list of to dos for the group and ask them how they might do that using the app.
- Ask the user to change their notification settings because they want to be notified for all messages posted to the channel.
- Ask the user if they have any final thoughts and feedback.

## A/B testing:

Ask the user which icon more clearly conveys the message of “Task manager”

**A.**



**B.**





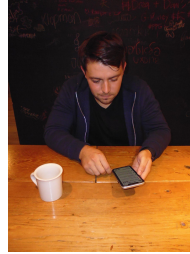
## Paper prototype usability testing:



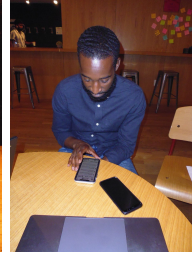
Rawan



Brittany



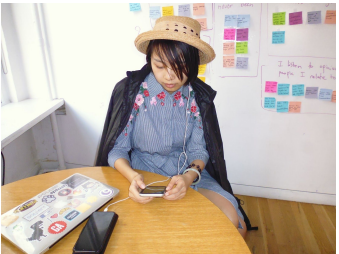
Corey



Saleem



Eric



Jet



Soojin

# Paper prototype usability testing and A/B testing notes:

## Type of device used to conduct test:

iPhone X

## Participants:

Rawan

Brittany

Corey

Saleem

Eric

Jet

Soojin

## The school the user attended:

R: General Assembly NY - User Experience Design Immersive

B: General Assembly NY

C: General Assembly NY - Software Engineering Immersive

S: General Assembly NY - Digital Marketing

E: General Assembly NY - Digital Marketing

J: General Assembly NY - User Experience Design Immersive

S: General Assembly NY - User Experience Design Immersive

## Video chat:

R:

B:

C:

S:

E:

J:

- The placement of the Leave Call button was weird. It should be separated from the other 3 buttons which are for video and audio preferences.
- She would like a back button to go back to the previous screen while still being on the video call.
- She would like to be able to access the task manager from the video call too (icon on top right).

S:

- She preferred "End call" instead of "leave call".



## Task Manager:

R:

- + sign was difficult to understand on the task manager.
- For first + sign, she suggested to possibly call it “Add Task”.
- For the second + sign, she suggested to possibly call it “Done”, “Submit” or “Complete”.
- The second + sign is confusing because it is the same as the first + sign so it gives the impression that you will add yet another new task.
- On the task input page, if following iOS format, a “Done” button could be on the top right of the screen instead of the bottom center.

B:

- The first + sign was easy to understand.
- The second + sign was confusing because it is the same as the first one so it gives the impression that you will add yet another new task.

C:

- The first + sign was easy to understand.
- The second + sign was confusing because it is the same as the first one, he didn't know whether pressing the second + button will create yet another additional task or if it would just save.

S:

- The first + sign was easy to understand, in fact very intuitive to have a + button.
- The second + sign was confusing because it is the same as the first one, he didn't know whether pressing the second + button will create yet another additional task or if it would just save. He would have preferred if it had said “Save” or “Done”.

E:

- The placement of the task manager icon was odd to him. A task manager was unexpected so the icon didn't really register/mean anything in his mind. Instead of having the icon at the top of the screen, he would have preferred if it were on the bottom of the screen spelt out in letters “task manager”.

J:

- She found it confusing that the edit button was so far from the + button.
- The second + sign was confusing because it is the same as the first one, she didn't know whether pressing the second + button will create yet another additional task or if it would just save. She thinks the second + button should be replaced by a text button that says “Confirm” or “Save”.

S:

- The first + sign was easy to understand.
- The second + sign was confusing because it is the same as the first one, she didn't know whether pressing the second + button will create yet another additional task or if it would just save. She would have preferred if the second + button said “Add” or “Save”.

## Notifications:

R:

B:

C:

S:

E:

J:

S:

## A/B Testing:

R:

- “A” more clearly represents tasks because of the list in the icon, though “B” is prettier.

B:

- “B” was preferred because it was a simpler looking icon. However “A” conveyed the idea of a “list”.

C:

- “A” was preferred because it conveyed a list and tasks whereas “B” just looks like a clipboard.

S:

- “A” was preferred because it conveyed a list and tasks.

E:

- “A” was preferred because it conveyed a list and tasks.

J:

- Neither. She feels a task manager would be better served with an icon with just a list and without the tick mark. It would resemble more closely what the task manager in the app looks like.

S:

- “A” was preferred because it conveyed a list and tasks.

# Paper prototype usability testing insights:

## Video chat:

- The placement of the Leave Call button was strange and should be separated from the other 3 buttons which are for video and audio preferences.
- A back button to go back to the previous screen while still being on the video call should be incorporated.
- Access to the task manager from the video call should be incorporated (icon on top right).

## Task manager:

- The second + sign was confusing because it is the same as the first one, user didn't know whether pressing the second + button would create yet another additional task or if it would just save. Users think the second + button should be replaced by a text button that says either "Save", "Done", "Confirm" or "Add".
- Change wording of "Edit" button in Task Manager because it is confusing in terms of what it is referring to.

## Notifications:

- No problems reported.

## A/B testing (icon selection):

**A.**



71.4%

**B.**

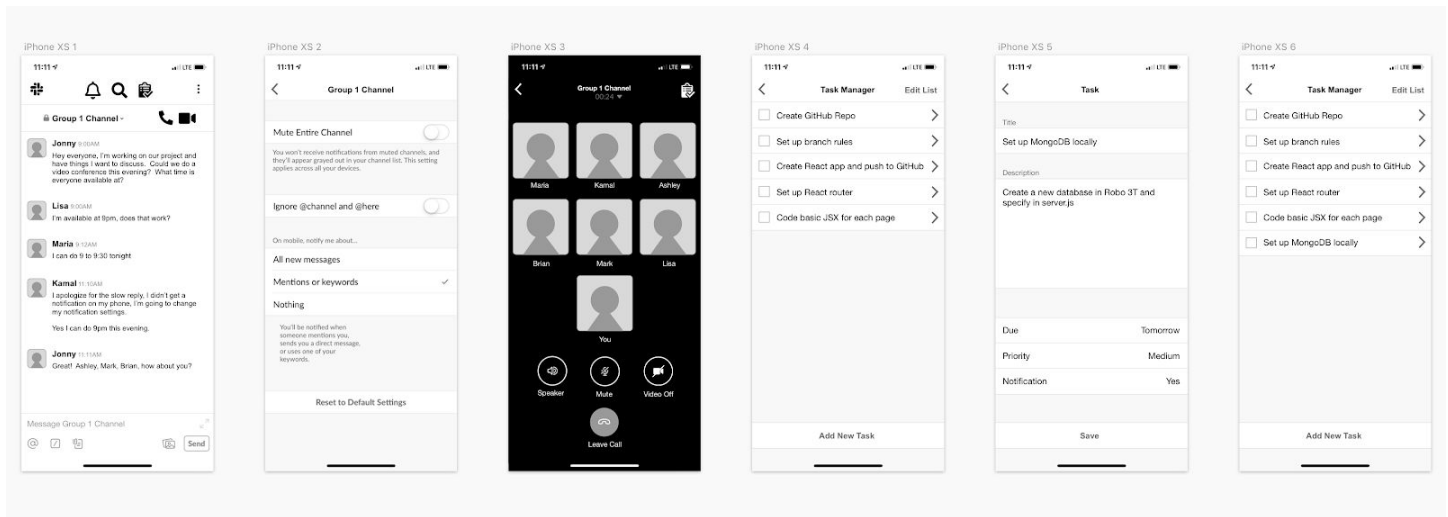


14.3%

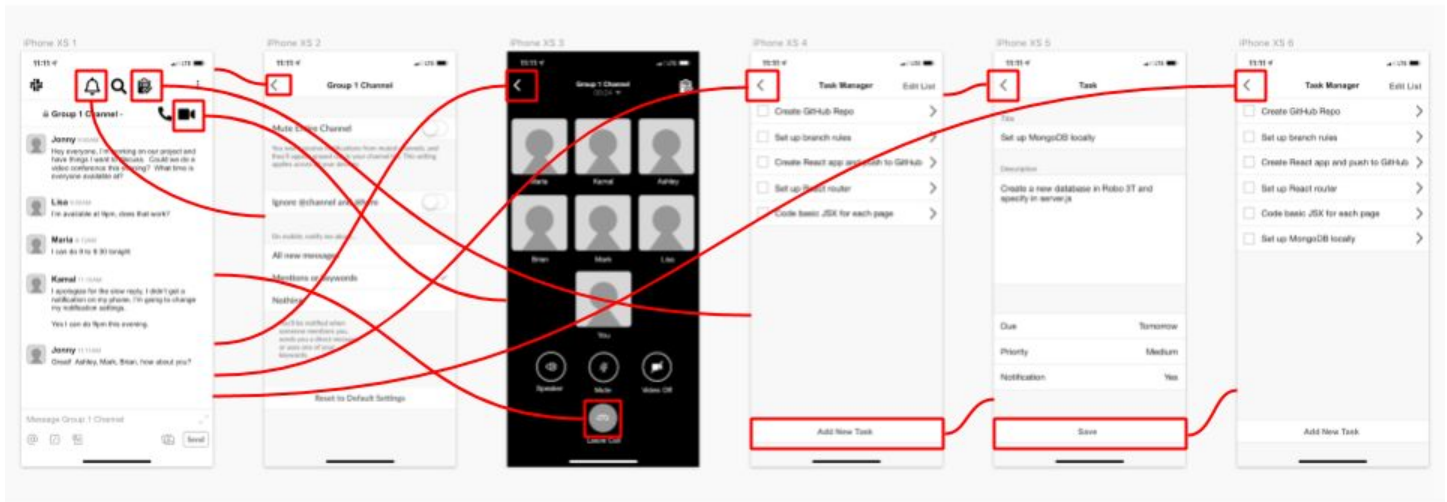
Neither: 14.3%

# Mid fidelity prototype:

Based on the key insights gained from the paper prototype usability testing, a mid fidelity prototype was created.



## Mid fidelity prototype wireflow:



## **Mid fidelity prototype usability testing target audience:**

Adult students.

## **Mid fidelity prototype usability testing discussion guide (questions users were asked):**

- Hello and short self introduction.
- Explain to user that Slack is implementing new features aimed at adult students.
- Ask the user if they have any initial thoughts about what they see and to talk out loud throughout the user test.
- Tell user a scenario where they are working on a group project and need to connect with each other on the weekend remotely.
- Ask the user how they might set up a visual conference call.
- Ask the user to go back to previous screen without exiting the call.
- Ask the user to go back to the video call.
- Ask the user to exit the video call.
- Tell the user that after the call, they want to note down a list of to dos for the group and ask them how they might do that using the app.
- Ask the user to change their notification settings because they want to be notified for all messages posted to the channel instead of just @here, @channel, @name.
- Ask the user to rate each task from a scale of 1 to 5 with 1 being very difficult to accomplish and 5 being very easy to accomplish.
- Ask the user if they have any final thoughts and feedback.

## Mid fidelity prototype usability testing:



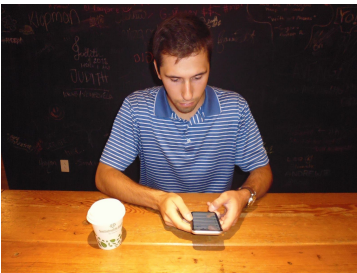
Jaabel



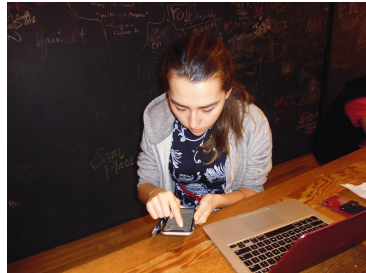
Jordan



Bilal



Matt



Desiree

# Mid fidelity prototype usability testing notes:

## Type of device used to conduct test:

iPhone X

## Ease of use scale (1 to 5):

1: very difficult to use

5: very easy to use

## Participants:

Jaabel

Jordan

Bilal

Matt

Desiree

## The school the user attended:

J: General Assembly NY

J: General Assembly NY - User Experience Design Immersive

B: General Assembly NY - Software Engineering Immersive

M: General Assembly NY - Software Engineering Immersive

D: General Assembly NY - Software Engineering Immersive



### **First impressions:**

J:

- He said it was an easy to understand app visually.

J:

- He said it was an easy to understand app. He noticed the new sets of icons including notifications, tasks, phone call, video chat.

B:

- He said it was an easy to understand app, he noticed all the new icons and recognized what they were (notifications, tasks, video chat).

M:

- He immediately recognized the video chat icon, but he didn't recognize the notifications icon and tasks icon.

D:

- She immediately recognized that there were new icons, but she didn't recognize what the notifications icon and tasks icon symbolized.

### **Video chat:**

J:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

J:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

B:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

M:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

D:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

## Task Manager:

J:

- Failed to accomplish task.
- He didn't recognize the icon (he thought it was a copy and paste to clipboard icon rather than a tasks icon).
- 10 seconds to accomplish task with some help.
- Ease of use score 1.

J:

- Success accomplishing task.
- 3 seconds to accomplish task.
- Ease of use score 5.

B:

- Success accomplishing task.
- 3 seconds to accomplish task.
- Ease of use score 5.

M:

- 50% success rate accomplishing task.
- 10 seconds to accomplish task.
- Ease of use score 4.

D:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 4.

## Notifications:

J:

- Success accomplishing task.
- 4 seconds to accomplish task.
- Ease of use score 5.

J:

- 50% success rate accomplishing task.
- 10 seconds to accomplish task.
- Ease of use score 3.
- He mentioned that as a nature of habit, he went to the 3 dots in order to change the settings for notifications, however after pressing the bell icon, he understood what it did and felt it was good to have visible.

B:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

M:

- 50% success rate accomplishing task.
- 5 seconds to accomplish task.
- Ease of use score 3.

D:

- Success accomplishing task.
- 2 seconds to accomplish task.
- Ease of use score 5.

## Final thoughts:

J:

- He said overall the new features were easy to use, however he didn't recognize the icon for tasks.

J:

- He said overall the new features were easy to use.

B:

- He said the new features were intuitive and easy to use. On a side note, he said it might be good to consider differentiating groups from channels.
















M:




- He said after clicking on the buttons, it all made sense to him, but because he hadn't seen/used the new interface before, he was not used to the buttons and what each of them did.
- He felt the task icon should be in the chat box.

D:

- She said overall the new features were very intuitive and easy to use. She said the task icon was a little confusing at first because it was so unexpected, but after clicking on it, it all made sense.

## Mid fidelity prototype task summary:

Tasks	User 1 Jaabel	User 2 Jordan	User 3 Bilal	User 4 Matt	User 5 Desiree	Avg. time on task	Avg. easiness rating (5: easy)	Success rate
1) Start video chat, temporarily leave video chat screen, leave video chat.						2 secs	5	100% 5/5 users
2) Add new task using task manager.						5.6 secs	3.8	60% 3/5 users
3) Change notification settings for channel.						4.6 secs	4.2	60% 3/5 users

 Direct path  
100%
  Indirect path  
50%
  Failed  
0%

## **Mid fidelity prototype heuristic evaluation:**

Overall users felt the new features were easy to use. However since the top navigation was a new layout, users found some icons unexpected and as a result did not necessarily recognize what they were without tapping them. Once they tapped the icon, then they immediately understood why a particular icon was chosen and used.

## **Recommendation:**

Label top navigation icons (text under each icon defining what it is).

# Final high fidelity prototype:

