Low-fi Prototype & Evaluation

Team Mission Impossible
Our Team

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Mission Statement

Improve the online learning experience by bringing students together and motivate them to collaborate and interact as they would in an in-person setting.
Problem and Solution Overview

Students across the board are currently struggling with engagement, motivation, and accountability, and incoming freshman are hit especially hard. We want to build a community that people are excited to join, and make studying less of a solitary activity.
Sketches
Design #1: Study Buddy

Why?

- Fun and familiar way to match with people, rather than just an email
- Avatars instead of pictures to almost gamify the system
- Easy to message within the app itself
Design #2: Recorded Lecture Party

Why?

- Rather than zoom sharing, having a universal pause/play button was key
- Simulates an in-person class feeling, like you are talking to your friend next to you about a question in lecture
- Engaging
Pros

- Reduces friction to find compatible people
- Short and sweet work time, easy to focus
- Encourages people to meet others in similar courses/academic interests

Cons

- People spend time chatting and not studying
- Not as novel or new
- Limited number of people, so may have bad matches early on
- If people reschedule or don’t show then one person is left on the hook with no partner
Pros

- universal pause
- accountability of watching with friends, may be more comfortable to ask questions
- Room for a teacher/TA use case + analytics
- MOOCs or flipped classrooms

Cons

- students pause for different reasons (i.e. taking notes, getting food, bathroom) so it might be difficult to know when a “suggested” pause is valid/valuable
- Getting enough people interested to do use this consistently
Recorded Lecture Party!

Why?

- Study Buddy isn’t very novel
- Could hinder studying instead of focus
- RLP has larger implications for online classes
- Stanford research suggests that students retain more information when they learn this way
- Accountability is still there
Simple Task: sign up for classes and accept a watch party invitation

Stanford University

Fall 2020

CS 377E
ME 80
ENGR 40M
CS 193A

Join Watching Pages
Moderate Task: invite a friend to watch a lecture and start watching

[Diagram showing a web page with lecture invitations and upcoming lectures.]

Upcoming

- Week 1, Lecture 2
  - Scheduled at 7:00 PST
  - with Pau, Jake, and David

- Week 1, Lecture 3
  - Scheduled at 10:00 PST
  - with Pau

My Lectures

- Invitations
- CS 377E
- ME 80
- ENGR 40M
- CS 193A
Complex Task: ask question and pause the video to answer questions
Recruits:

- 5 college students across the country
- Experience with in-person and virtual classes
- Ages 20-22

- Consent Form
- Script
- Observer, Facilitator

Lo-fi Testing Procedure:

INTRO

Hi, I'm _____. I'll be conducting the usability test today. We'll be asking you to complete three tasks using this paper prototype. Please let us know what you think out loud.

We'd like to record footage of this test for quality assurance purposes.

Task 1:
Your first task is to sign in and accept a watch party invite

Expected flow:
Sign Up Page → Home

Task 2:
Your second task is to invite a friend to join you in watching lecture

Expected flow:
X → Y → Z

Task 3:
Your third and final task is to ask a question, pause the video, and finally answer the question

Expected flow:
X → Y → Z

Asks a question by clicking the plus button → sent to Added a question frame → Suggest a pause by clicking Suggest Pause button → sent to Question Answering frame → Answers questions → Clicks submit and brought back to Main Video frame
Results Overview

“A better way to consume recorded lectures”

Confusing how watch groups are made (friends vs. classmates)

Buttons didn’t always match the function
Key Insights

Medium Task

- Home page should have easy access to upcoming lectures
- Invitations tab should allow people to invite others
- Make it clear whether to invite friends or classmates with easy access to a calendar

Complex Task

- Suggest pause button is very confusing
- Universal play/pause button is not intuitive
- Questions are meant to be discussed in a back and forth conversation
Thanks!
Appendix

Sketches
Consent Forms
§ 377E Consent Form

Team mission impossible’s prototype is being produced as part of the coursework for Computer Science course CS 377E at Stanford University. Participants in experimental evaluation of the prototype provide data that is used to evaluate and modify the interface of mission impossible. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers (David Estrada-Arias, Paulina Anzaido, and Jacob Wagner) or with Professor James Landay, the instructor of CS 194H:

James A. Landay
CS Department
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650-498-8215
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the mission impossible’s experiment. I also give permission for images/audio records/video of me using the prototype to be used in presentations or publications as long as I am not personally identifiable in the images/audio records/video. I understand I may withdraw my permission at any time.

Name _______ Hana Burgess_________
Participant Number ___________ 015________
Date ___________ 10/13/2020________
Signature _______ Hana Burgess_________
Witness name _______ Elena Wagenmane_________
Witness signature _______ Elena Wagenmane_________

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Name _______ jason nguyen_________
Participant Number ___________ 017________
Date ___________ 13 October 2020________
Signature _______ jason nguyen_________
Witness name _______ Jacob Wagner_________
Witness signature _______ Jacob Wagner_________

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Name _______ logan fairman_________
Participant Number ___________ 015________
Date ___________ 13 October 2020________
Signature _______ logan fairman_________
Witness name _______ Jacob Wagner_________
Witness signature _______ Jacob Wagner_________