

# **EdTech: Ideation and Experience Prototypes**

Studio 2

# Our Team



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# New Domain

Improving the frequency, enjoyment, and learning outcomes of  
**class discussions.**

# This presentation

1. Needfinding & POVs
2. HMWs
3. Experience Prototypes
4. Summary

# **Needfinding II**

5 additional interviews  
(1 family member and 1 Stanford student)

# Participant 8: Caterina

Law professor and mother of two

Frustrated by perceived lack of educational video games for kids

Wanted to keep kids away from violent games and give them something educational

# Participants 9 & 10: Joe and Nick

High school juniors enrolled in Middle College at Canada College.



Joe loves both the interaction of in-person classes and the convenience of online classes.



Nick's film class satisfies him intellectually because of the rich discussions.

# Participant 11: Janice

- Professor of fiction and nonfiction storytelling
- Takeaways:
  - Importance of classroom discussion
    - Camaraderie
    - Managing students' shyness
  - Importance of peer review
  - Tailoring class to participants



# Participant 12: Samuel

4th year Stanford CS undergrad.

Tension: despite being a CS student, their favorite classes are humanities classes, and within CS classes they actually prefer the introductory courses to the higher level ones.

Tension: sometimes wishes for more discussion section, but “hates” adding to schedule



**12 POV ideas → 3 POVs**

# POV 1: Gabriel

We met Gabriel, an experienced humanities professor at Stanford.

We were amazed to find that although he loved the idea of technology in the classroom, he refused to use it because it got in the way of body language.

It would be game-changing if students could interact with their technology without it blocking their body language, or to somehow replace this feedback.



## **POV 2: Joe**

We met Joe, a motivated high school student taking community college classes through the Middle College program at Canada College.

We were amazed to realize that Joe loved both the interaction of in-person classes and the convenience of online classes.

It would be game-changing to satisfy his needs for classroom interaction and flexible time/location at the same time.

## POV 3: Samuel

We met Samuel, a 4th year stanford computer science undergraduate student.

We were interested to find that they preferred introductory courses for their welcoming and energetic culture.

It would be game-changing if higher-level classes could retain that culture.

**~40 HMW ideas → 3 HMWs**

# **HMW 1: Make finding study groups fun?**



Joe (9) →

POV 2 (satisfy interaction  
need for online courses) →

HMW 1

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# HMW 2: Integrate class discussions into everyday life?

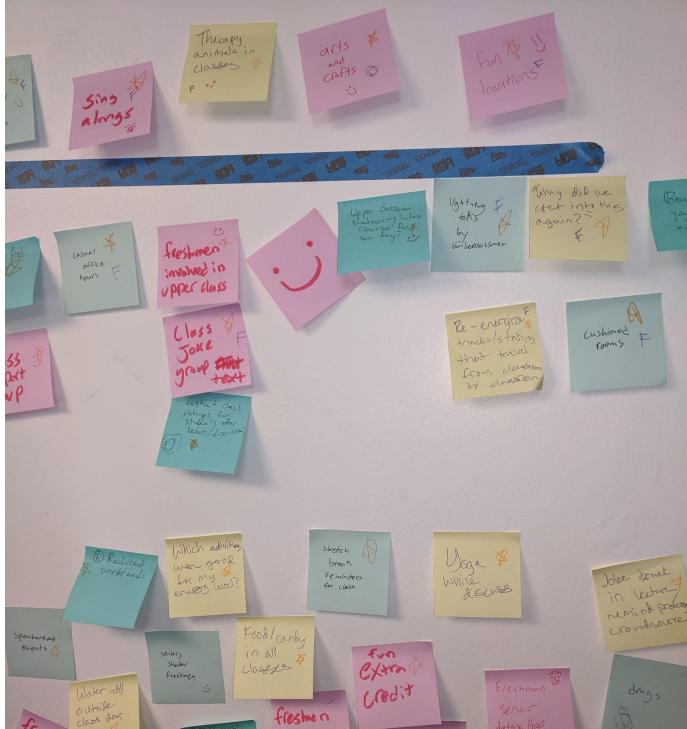


Joe (9) →

POV 2 (satisfy interaction need for online courses)

→ HMW 2

# HMW 3: Bring back the freshman energy in high-level classes?



## Samuel (12) →

## POV 3 (welcoming and energetic culture in upper division)

→ HMW 3



# Body Language Problem

Tech needs to have a clear advantage.

# Experience Prototyping

3 prototype testing sessions with 5 participants (4 Stanford students)

# PROTO 1: Badges



Joe (9) →

POV 2 (satisfy interaction  
need for online courses) →

HMW 1 →

PROTO 1

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# The idea

- Persistent digital achievements for discussion or study group participation
- Make finding and participating in study groups more fun.
- Test using a literature interpretation activity with Heather.



# **What worked**

- “Nice reminder of what a good group discussion is.”

# What didn't work

- Lack of background knowledge on the activity
- Didn't take the badges seriously
- Peer-to-peer aspect was received poorly
- Not much more fun

# Validity

- We assumed this would be more enjoyable & useful

# PROTO 2: Remote Discussion



Joe (9) →

POV 2 (satisfy interaction need for online courses) →

HMW 2 →

PROTO 2

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# The idea

- Reading comprehension/ discussion task done over video call, with one partner going to check mailbox during the call.
- Test with Chris and Luke.



# What worked

- Call quality was excellent
- Conversation continued in detail for >7 min
- Only a brief interruption when checking the mailbox
- Materials on the phone were easy to access
- Fun!

# What Didn't

- Running out of topics near the end, could have used additional prompting questions
- Additional person could have added more perspectives / reduced conversational pressure

# Validity

- We were skeptical at the beginning
- Our hope was that this might work, and it did!

# PROTO 3: Freshman-Senior



Samuel (12) →

POV 3 (bring back freshman  
energy) →

HMW 3 →

PROTO 3

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# The idea

- Arrange a conversation between a freshman (Lim) and a senior (Kamaria)
- Make both feel more welcomed
- Re-energize academics



# What worked

- Freshman and senior both felt energized
- Conversation was enjoyable
- Appreciated the activity
- Would continue longer
- Would meet up again

# What Didn't

- Senior turned out to be RA, so she already regularly interacts with freshmen
- Would things have gone differently otherwise?

# Validity

- Lots of promise!

# Solution

Discussion Badges need refinement

Freshman-Senior Meetups and Ad-Hoc Remote Discussions both seem promising!

# Summary

13 diverse interviews

12 POV ideas → 3 POVs

~40 HMW ideas → 3 HMWs

3 Experience Prototypes → 2 solution ideas

*That's all Folks!*