

Redesigning the college experience

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Our background

- 2 of us are CS majors (except Eunice)
 - But Eunice has previously taken two CS classes, too.
- “What bugs you at school?” Mostly led to peeves in our classes
- Naturally, brainstorming gears towards problems in CS classes
- **Persona:** CS students at UC Berkeley

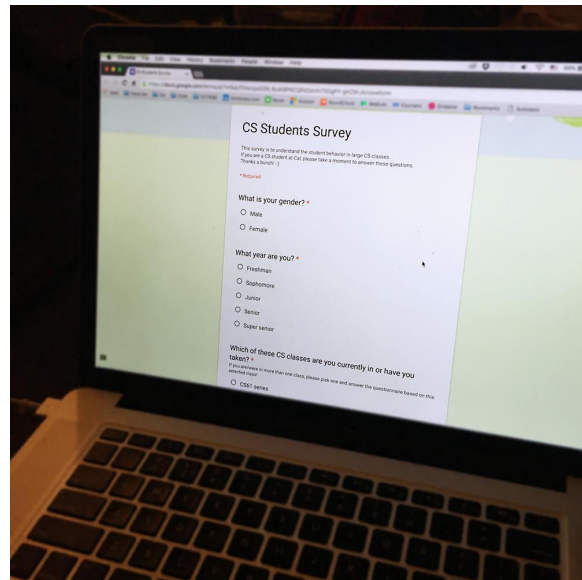
What are the problems found in CS classes at Berkeley?

Assumptions we jotted down

- It's difficult to find seats
- Students are less motivated to attend lecture
- Students lack interaction with instructors
- It's hard to see the screen/board or hear from the back
- Quality of TA's is inconsistent (not everyone has good TA's).
- Large class doesn't encourage students to ask questions
 - Student behavior/engagement varies depending on lecture vs. section
 - It can be intimidating to ask questions in front of a lot of students (don't want to be seen as dumb)
- Overarching problem: **Large class sizes negatively affect students' learning experience.**

Research

- To **validate** our assumptions and further **identify** pressing problems
- CS undergraduates that are large classes (i.e., > 400)
- 2 methods (Interviews/survey)
 - 4 interviews
 - 21 responses on Google form



Method: Interview questions

Open-ended, *experiential* questions

- What CS class are you taking?
- What are some of the things that bug you in this class?
- How often do you attend the lecture?
 - How often do you ask questions in lecture?
- How often do you attend the section?
 - How often do you ask questions in section?
- If your class is webcasted, how do you feel about it?
- What are some of the things you enjoy, being in a large class?
- What kind of additional resources do you wish you had?

Method: Survey

Short, *easily answerable* questions (mostly multiple choice, a few short answers)

- Demographics (gender and year)
- Which CS class?
 - Webcast availability?
- How often do you attend lecture/section?
 - Problems seeing the board/hearing in lecture?
 - Difficulty finding seats in lecture?
 - How often do you ask questions in lecture/section?
- Rate your TA
- Additional problems
- Highlights

What we found

- People usually go to sections
- People ask more questions in section
- Only few ask questions in lecture (too intimidating)
- People like the anonymity
- TA's are *generally* OK, but show inconsistency in ratings
- Good professors
- Crowded midterms (logistics, ugh.)

Beyond our control...

- Class too hard, too fast-paced, “not lit”, etc.

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Our focus

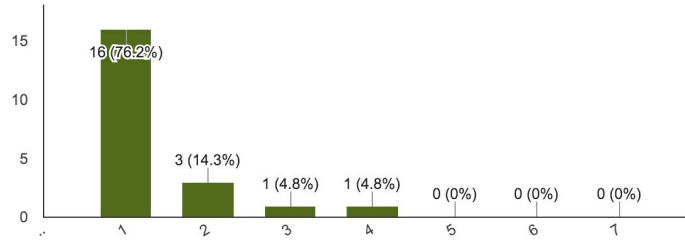
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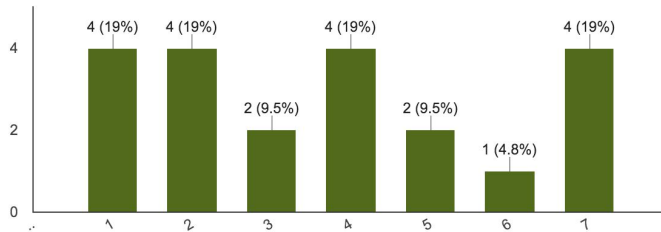
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(21 responses)

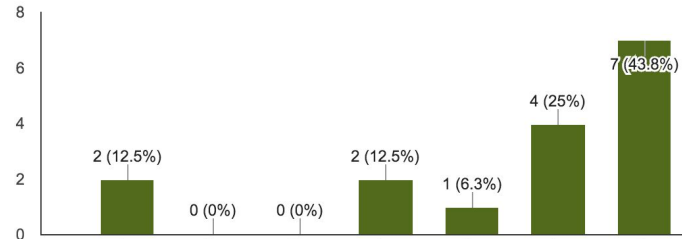


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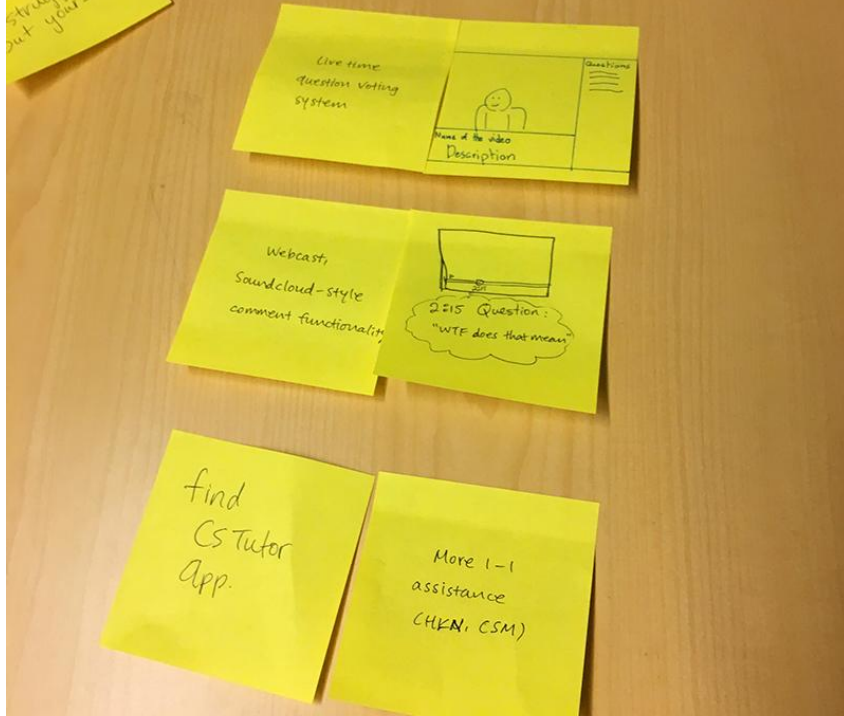


How often do/did you attend the section? (16 responses)



→ **Students are reluctant to ask questions.**

Brainstorming solutions



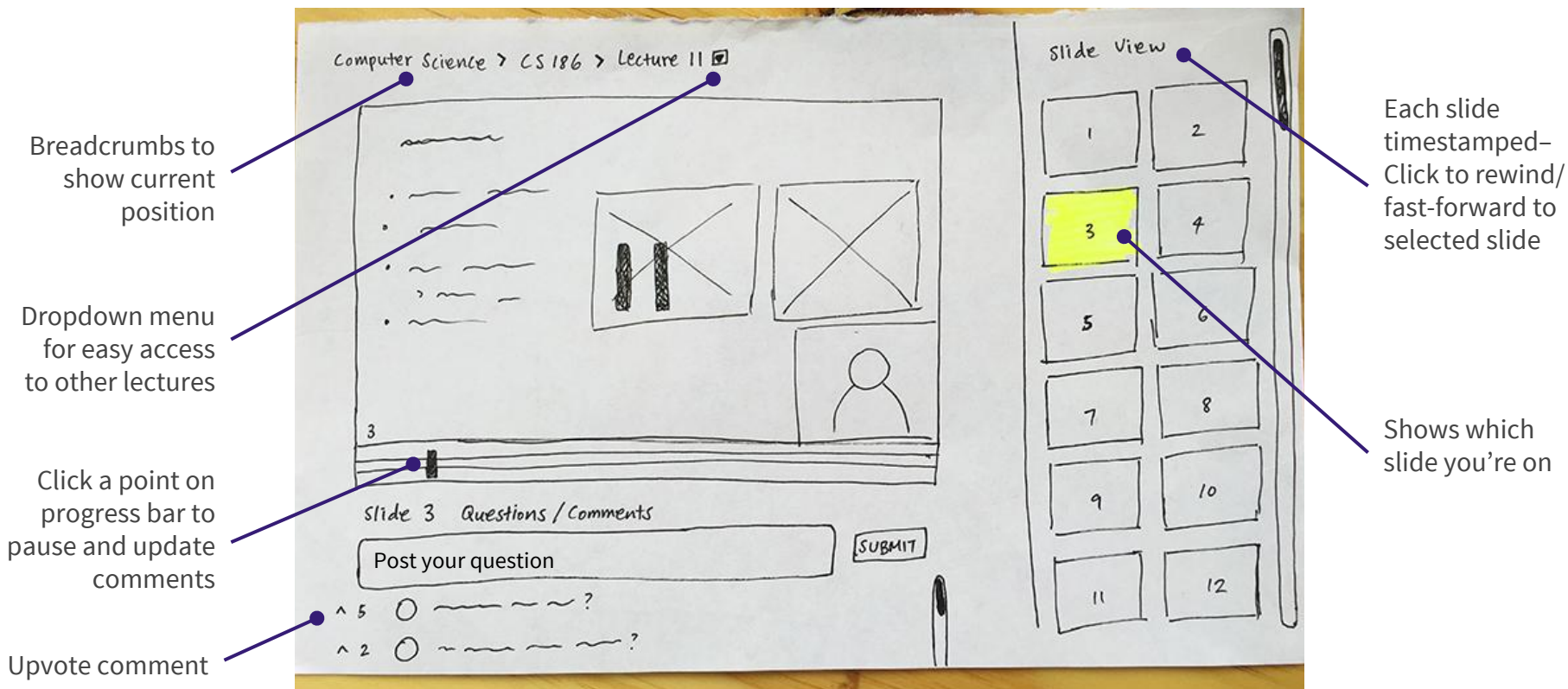
- Live time question voting system
- Comment functionality on webcast
- More 1-1 assistance (provided by HKN, CSM)
- Find CS Tutor App
- RateMyTA.com
- Professor's OH in group (fireside chat style)
- Periodic survey on student performance (*on how they are doing so far*)

What we decided on

→ An improved webcast experience

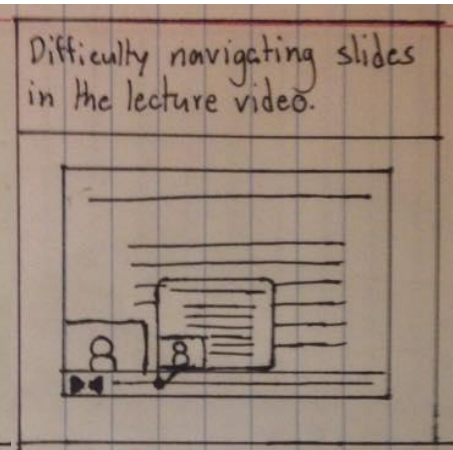
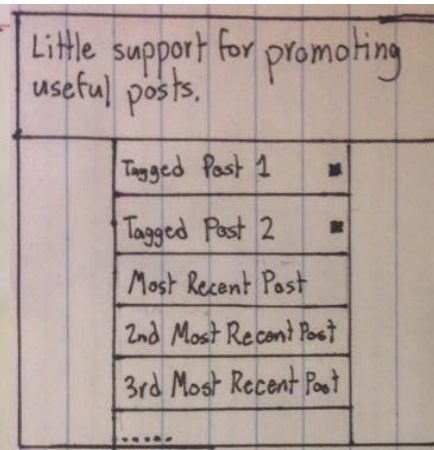
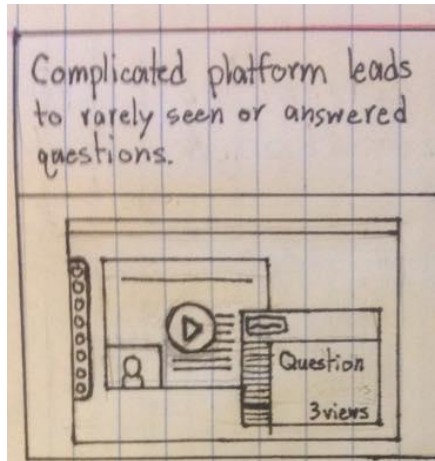
- We like “voting system” and “comment functionality on webcast”
- *Conglomerate of YouTube, SoundCloud and Reddit?*
- Pause to see students’ comments and questions on corresponding slide
- Clicking on slide on right directs viewer to that part of the webcast
 - Each slide is timestamped
- Upvote questions of higher relevance/importance
 - Options to view comments: top voted, slide order
- Easy access to other webcast lectures

Sketching/Low-fi wireframe



Storyboard

before - - - - -



after! - - - - -

