Griffin D, Lachlan G and Zara S
CS147
October 9, 2015

Assignment 2 Write Up

Studio Theme / Problem Domain
Focus / Leveraging social pressure to enhance focus

Initial POV
We met...
Lorraine, who has helped people meditate for years.
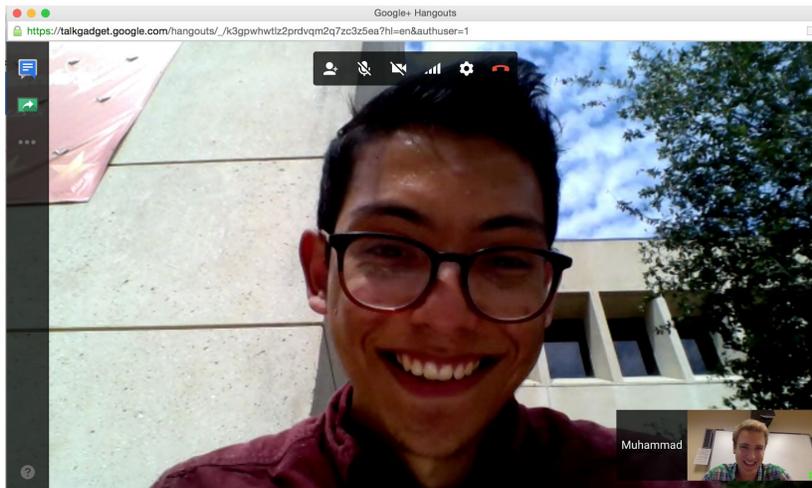*We were amazed to realize that...*
focus can be enhanced through a shared experience
It would be game changing to…
provide a support system for people trying to focus

Additional Needfinding

Muhammad Martinez

Muhammad is a junior studying CS at UT Austin. We began by talking about when, how and why he works in groups during his classes. He described the benefits as distributing the work and benefiting from different skill sets while also outlining what he viewed as the problems: finding a group and working with unreliable group members. We then discussed his experience interning at Facebook as a software engineer. He described asking questions as one of his biggest pain points. When we asked for specific examples, he described specific bugs that would take up to an hour to solve, mainly because he was either too afraid to ask for fear of looking dumb or just didn't know who to ask. He even explained that this inefficiency made him more interested in working at a startup than a larger company.

Dustin Harris

Dustin is a junior majoring in Chemistry/Biochemistry at UCSB. We interviewed him because he studied non-CS STEM. Dustin prefers to work in groups, but often won't because he doesn't know anyone in the class. He brought up his biophysical chemistry class as an example, recalling when it was 2am and he was stumped on the last problem of his homework set, but knew no one in the class who he could contact for help. He told us "having someone to work with would have made that easier." He also shared his fear of asking certain questions in a group for fear of looking dumb, calling his peers "intimidating."

Alice Borie

Alice is a senior at Carnegie Mellon majoring in Information Systems (a cross between computer science and business) who worked as a software engineering intern at Apple. Alice brought up group work as a huge pain point for her. She shared a story about working in a team of four on a semester long project, and the difficulty of managing and motivating a girl on her team who

wasn't competent, saying "I think I'm better than most of my group members and that frustrates me." She also revealed that she needs to "be able to trust that the other person knows their shit or it's a waste of my time" highlighting the importance of trust.

Three Revised POV(s)
+ HMW Statements (selected HMWs bolded)

POV 1

We met…

Muhammad, a Junior studying CS at University of Texas, Austin, who interned at Facebook last summer as a software engineer.

We were amazed to realize…

he spent 30-45 min every other day trying to answer questions.

It would be game-changing to….

help him find answers to his questions more efficiently.

How might we…

- create a process to more efficiently find the answer
- get better documentation
- connect him with others asking the same question
- allow him to ask questions anonymously
- help him find the right person to ask
- eliminate the need to ask questions
- make asking question to boss more like asking questions to friend
- make asking questions less embarrassing
- make asking questions fun
- anticipate questions
- provide unintimidating
- **know when people are available/willing/qualified to help**
- give him something to do during while he's searching for an answer

POV 2

We met…

Jenny, a graphic designer and artist.

We were amazed to realize…

she sometimes lost track of what she was doing as she was doing it.

It would be game-changing to….

help people keep track of what they are working on.

How might we...

- stop people from looking at their phone during work
- remove the need to know/keep track of what you're working on
- outsource the responsibility of tracking tasks
- use social pressure to encourage people to not get distracted

- forget about all the other things they're worried about
- eliminate distractions from the surroundings
- reward people for focusing on one thing at a time
- build negative reinforcement for not focusing on one thing at a time
- visually present to people what they should be working on
- remind people of their current task
- cut out non-essential tasks (max task list)
- prioritize tasks
- know immediately when people have lost track
- avoid committing to tasks we don't want to do
- **encourage people to unitask**

POV 3

We met…
Alice, an Information Systems major (CS meets business) at CMU
We were amazed to realize…
that she doesn't feel like collaborating with her peers is worth it unless there is some level of trust between them and knowledge that the other person "knows their shit"
It would be game-changing to….
overcome the trust barrier
How might we...
- connect students with people in their classes who "know their shit"
- **connect students with people in their classes who they can trust**
- get her to see the value of working in groups
- establish a network of mutual friends
- measure who we can trust
- eliminate the need to trust people
- eliminate the need for others
- teach people to "know their shit"
- reap value from groups beyond knowledge-sharing
- get her excited about working in groups
- get a group member to understand strengths and weaknesses of other group members
- build trust
- create a process for group members to become vulnerable with one another
- make it impossible to work by yourself
- humble people
- help people new to campus connect with other people
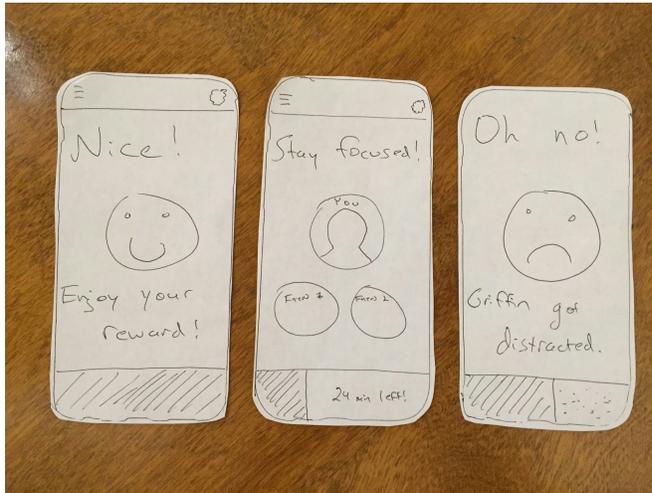
Three Experience Prototypes:
Leveraging Social Pressure for Group Work
Assumptions

In attempting to encourage people to unitask, we assumed that people would be more likely to focus on their work (meaning not get distracted by their cell phones) if their friends were relying on them to do so.

What we made

We selected two subjects to work on homework alongside a teammate. They were told that if each member could go three minutes without being distracted, they all would earn a reward. To prepare, we found a reward we could offer (fruit snacks) and we drew out a start and two end screens. The start screen shows the team and the time goal, whereas the end screens have either a happy face or sad face to illustrate success or failure respectively.

How we tested it

We tested the prototype on two freshmen (Trevor Tsue and Samir Sen) in their dorm lounge where they often do work. We ran the prototype experience twice. In the first round, Lachlan was a part of their team who successfully made it to the three minute mark and the participants got fruit snacks. In the next round, Lachlan intentionally picked up his phone at the two minute mark, making all the participants lose.

What worked? What didn't? What we learned?

Trevor agreed that having the pressure of another student relying on him did increase his motivation to leave his phone on the table. However, Samir said it wasn't peer pressure that kept him interested, but rather the element of surprise in not knowing what the reward was. The two also said the app might be distracting and that they likely wouldn't use it. To improve it, they suggested adding an element of tracking and competition so users could compare their focus stats, or to include an element of surprise by letting users select a variety of rewards, but then spin a wheel to see which one they get.

Was assumption valid. Did new assumptions emerge?

The assumption that social pressure and a shared goal would sufficiently motivate users to work held out less than we had hoped; an element of surprise emerged as a greater motivating factor.

<u>Buzzing</u>

Assumptions

Our biggest assumption was that the largest distraction that our peers face while trying to work is their phone. We also assumed that getting people to associate an admonishing buzz with picking up their phone would help them avoid picking it up while they were trying to focus. Finally, we assumed that whatever small annoyance the buzzing might be, people would still appreciate the reminder to stay focused.

What we made

Since we really wanted to focus on the experience of receiving a buzz rather than any specific UI design, we chose not to create fake screens. Instead, to isolate that experience we had a friend of Samantha's (our subject) text her, and used that dummy text as our prop.

How we tested it

We tested the experience by first asking Samantha to begin working on some homework. About 5 minutes in, we then had her friend text her. Then when she picked up her phone, Lachlan, one of our group members, make a loud buzzing sound. We decided to keep the experience short and focused so that we could zero in on her reactions to the buzzing.

What worked? What didn't? What we learned?

Conceptually, the buzzing worked. Samantha admitted she often got distracted by her phone while working and told us, referring to the buzz: "If it's annoying enough it would prevent me from checking my phone". However, as we dug deeper, we learned that the buzzing idea had problems. For one, Samantha explained that she got more distracted by other people than by her phone. When we asked for specific moments, she told us about a few minutes when she really needed to focus in which she just turned off her phone. She also said she didn't like the idea of being punished for picking up her phone when she received a call or a particularly important text. Finally, when we asked if she could imagine herself using the feature, she said she wasn't sure.

Was assumption valid. Did new assumptions emerge?

We found that many of our initial assumptions were directly contradicted. Based on Samantha's experience, we learned that many distractions do not come from the phone, but from other sources like other people. She also didn't really seem to need the buzzing. One assumption that emerged from that interview was that different solutions to a distracting phone were necessary to really get people excited.

<u>Finding Groups</u>

Finding people to work with in classes – either to form study groups or find partners for a group project – was a problem that came up in our interviews and one that we find interesting. We decided to test how people reacted to seeing first and second connection friends in their class.

We conducted the prototype twice with Emmanuel Assa, an outgoing junior, and Jonathan Sington, a shy freshman.

Assumptions
We assumed people struggled to form groups because they didn't know who they could trust to be a competent group mate. As a result, we assumed people would either choose not to work in a group or worry that whatever group they were in was suboptimal. We also figured that particularly in STEM classes, people wanted to form groups. Additionally, we assumed people would feel comfortable reaching out to second-degree friends (friends of friends).

What we made
We drew rough wireframes for four key screens that a user might encounter and then ran our subjects through the screens. We tried to keep them detailed enough so our users knew what was happening while still sufficiently general so they could fill in the gaps with new ideas or unexpected suggestions.
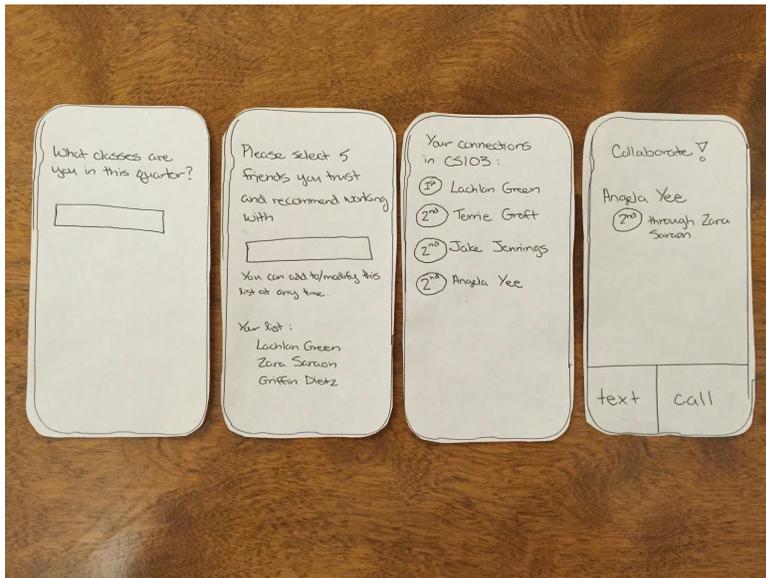
How we tested it
First, we asked Emmanuel and then Johnathan, both STEM students, to imagine the quarter was just starting, and that they were wanted to form a group. We then handed them the first wire frame, which prompted them to enter in their classes. Our next wireframe instructed them to pick 5 people from a list of their friends who they trusted. Next, we handed them a list that showed their first and second degree connections in a given class and, after prompting them to tap on a name, we handed them a final wire frame with the cell phone number of that connection.

What worked? What didn't? What we learned?
Interestingly, both Emmanuel's and Jonathan's interviews organically arrived at the same conclusion. Emmanuel, a gregarious, extroverted guy explained that finding group members

had generally not been too much of a problem for him. Even when he knew no one in the class, he said he had no problem reaching out to new people. Jonathan, a shy, extremely introverted freshman, explained that most of time he preferred to work alone. They also both mentioned that if they were to use the app, they would likely only use it once at the beginning of the quarter. Though they liked the concept of finding people they could trust, neither seemed excited about the network idea. However, when we broadened the conversation to include group work in general, both loved the idea of being able to message other people in the class around them and ask questions. They both told us stories about working on psets or labs the night before they were do and struggling to find friends who were up and in the class who they could ask for help. After pausing a moment to imagine something that would connect him to other kids in his class, Emmanuel described it as "incredibly useful". Jonathon also loved the idea of "getting help now". One of our biggest learnings was that in that context they didn't mind much how well they knew the person, just that they were up and willing to help. They also both liked the idea of being able to see where those other people were, and then being able to reach out to them in some way. Jonathan, who said he was concerned about bothering people, also mentioned how much we would love a status option so that people could set whether they were willing to offer help or not and if so, through which channel they preferred to be contacted.

Was assumption valid. Did new assumptions emerge?
We found that our central assumption, that people struggled to form groups because they didn't know who they could trust, though not wrong, turned out to be a much smaller pain point than we had realized. However other, interesting assumptions emerged. We realized that the night before a pset was due, many people really wanted to connect with others in the class but at the moment didn't have a great way to get help outside their immediate friend circle. Having both Emmanuel and Jonathan arrive at this point made for compelling evidence that we should further investigate this solution.

Most Successful Prototype

We found the Finding a Group experience prototype to be most successful in revealing a compelling solution, even though the solution we found turned out to be different than the one we envisioned. Through asking people about forming groups, we learned that what most excited our subjects was a way to get help with homework the night before it was due. For each of the other experiences we tested, users liked the idea of the features, but admitted that they probably wouldn't really use it. In contrast, both Emmanuel and Jonathan were genuinely excited about the prospect of being able to reach out to classmates also working late at night before a pset or assignment was due.