2.1 Problem Statement

How might university students working on class projects in teams have a communicative, supportive team experience to complete their project?

2.2 Problem Background

Context

Why does this problem matter? What is the need not being met? What is the impact of inaction?

Many college students have had at least one bad team experience. According to an online survey we conducted consisting of 30 University of Washington students, approximately 40% of respondents said that their biggest pain-point was communication, and another 30% of respondents said their pain-point was the equity of work among team members.

From our research, we found that there are currently no solutions that offer structured guidance for team collaboration specifically focused on classes. Consequently, students have resorted to using various task management and communication platforms to manage the teams in their classes, such as Slack and Notion. These platforms only provide the basic means of communication and task management without giving teams advice on how they can set goals, communicate, and work together effectively.

Creating a platform that gives a form of baseline guidance for classroom-based teams to work well together will help teams have a likelihood of project success and team satisfaction.

Information Problem

What aspects of the problem can you solve through an information solution?

Our solution is going to be a mobile-first web application that gives relevant guidance for how teams can work together, build meaningful connections, and finish with a successful project. We aim to address the issues of communication, equity of work, and team cohesion with this solution.

First, we aim to provide a structured team agreement form for teams to fill out and agree upon before starting their first assignment in their project. This will help guide team members to establish expectations that they should follow from beginning to end of the project.

Second, we want teams to explicitly delegate tasks throughout each assignment sprint so that everyone knows their responsibility, with some way of altering the roles of the members in the team. This helps team members feel a sense of ownership in the project.

Lastly, we want to promote open, reflective feedback in a safe, non-judgmental space amongst team members to discuss project issues, questions, and overall team progress. This will allow for teams to develop their skills and review their effectiveness, rather than just continuing their routine tasks.

References

What evidence (articles, statistics, research, data etc.) supports the problem you have identified?

Alfonseca, E., Carro, R.M., Martín, E. et al. The impact of learning styles on student grouping for collaborative learning: a case study. User Model User-Adap Inter 16, 377–401 (2006). https://doi.org/10.1007/s11257-006-9012-7

Harvard Business Review, High-Performing Teams Need Psychological Safety.

Re:Work, The five keys to a successful team

Tseng, H., Ku, H. Y., Wang, C. H., & Sun, L. (2009). Key factors in online collaboration and their relationship to teamwork satisfaction. Quarterly Review of Distance Education, 10(2). https://laulima.hawaii.edu/access/content/user/jfifield/645project/hungwei.pdf

2.3 Research Questions

Define research questions relevant to problem statement → List hypothesis / assumptions about the question → Identify research activity → Assign members (ideally all members will do some part of each research activity)

What process do students go through to find a team?
- Find their closest friends
- Find via Canvas "People" section
- Find a group based on project interests
- Try to form a balance of skill sets on the team

Research activities: Lit review on teamwork in college; Interviews with UW students asking how they find teams for projects

What does group work culture look like outside of tech majors?
- Varies on how dependent on projects their majors are
- Sparse and unstructured

Research activity: Survey asking how often students work on projects

What groups of people are having trouble looking for teams?
- students enrolled in 1xx/2xx level courses
- People don't know anyone before enrolling a class
- People exploring a new field and wants personal project/work experience
- People who are introverted or less sociable

Research activities: Market research on team matching apps; Market research on different demographics that look for teams

What makes a team work well together?
- Group members have the same work ethic/style
- Each group member specializing in a skillset
- Effective Communication

Research activities: Look for existing research on effective teams; Interview people and ask what worked well for teams

How are teams formed in classes?
- Randomly assigned by their professor
- Happen to be the people seated around you
- Instructor allows students to choose their groups

Research activities: Ask professors how they form teams for their class; Ask students how they formed previous teams; Lit review for how teams are formed in professional spaces

2.4 Literature Review

Key Insights

Nicole | Leon | Collin | Kevin

2.5 Market Research

Research existing products, services that compete or inspire → Each member finds at least 5; document by capture screens, annotating or sketch out functions → Identify specific parts, functions that are relevant → Present & discuss as a team → Capture insights on stickies

Notion - One workspace. Every team.

Cons:
1. Steep learning curve
2. More catered towards personal use than team use

Key Insights

2.6 Initial User Research

Identify key audiences for your project → Develop interview script + questions and survey → Interview at least 5-6 users (qualitative) / survey at least 20 (quantitative) → Take notes on stickies: Identify and group stages in the users' journey; categorize by coloring stickies (see right) → Present & discuss as a team → Capture insights on stickies

Observation | Positive | Opportunity | Quote | Problem / Pain point

Key audiences
1. Professors
2. Non-Tech Majors
3. Tech Majors

Observations
- Similar interest and passion
- Students in class setting view skill sets as most important when considering a teammate
- Set clear project goals/expectations early
- Communication is paramount
- architecture students just help each other on individual projects
- Teamwork is important to business school
- they find teams randomly (who is sitting next to them)
- bio majors work in groups the most in labs
- less long term projects unlike tech majors
- Most students do not work on projects outside of school

Positives
- Most STEM majors like working in groups
- having a leader who delegates work and initiates work is good
- Teamwork occurs across most majors
- People like having established roles within a team
- Clear communication + clear expectations
- people are still willing to work with random people that they just meet in class

Quotes
- "Misunderstandings can become personal issues."
- "People (should) know when to step up or step back"
- "Professors want to minimize the amount of platforms they need to use."
- "I wished people had the same dedication in the project as I did."
- "Different work styles and lack of communication is a recipe for team failure."
- "Icebreakers help a group come together, especially if the group is formed randomly."

Opportunities
- Help people "break the ice" on a team
- web app for more class/project work
- mobile app if messaging is a core feature
- Improve communication tools on a formed team
- team needs to agree on expectations in the beginning
- Monitor team health & satisfaction

Problem / Pain points
- Scheduling

Survey questions
- What school do you attend?
- What is your major?
- Would you consider your major to be a tech-major or non-tech major? If undeclared, select "undeclared."
- What year of school are you in?
- How often do you work in teams in your major?

Key Insights
- Good communication is key to forming strong teams
- Similar interests and breadth of skills are sought after for longer projects
- Getting to know your team "personally" can improve team the team experience
- Possible ice breakers or team building activities built in
- Opinion: Web preferred over native mobile implementation
- Possible opportunity to provide light PM tools for keeping teams on track

2.7 Affinity Map / Research Insights

2.8 Values & Ethics