



UniVerse

“College mentorship with freedom and ease”

Table of contents

- 1 Title & value proposition
- 2 Problem/solution overview
- 3 Tasks
- 4 Heuristic evaluation results
- 5 Usability Goals
- 6 Major UI and product revisions
- 7 Prototype implementation
- 8 Demo
- 9 Appendix

Meet the team

Sally

Economics '25

Hong Kong



Steve

CS '25

California



Zijian

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Chengdu, China



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CS '24

California



Title & Value Proposition



UniVerse

“College mentorship with freedom and ease”

Problem & solution

Our Primary User:
College Counselors

Problem we are tackling:

Counselors lack independence when choosing students they want to work with (and topics) as they often work under a centralized topic

Brief synopsis of our proposed solution:
An app to allow Counselors to choose to work with small groups of students with interests and backgrounds that cater to their own knowledge.

Tasks

Tasks

SIMPLE

Find students who
counselors want to
work with

MEDIUM

Teach students in an app
environment

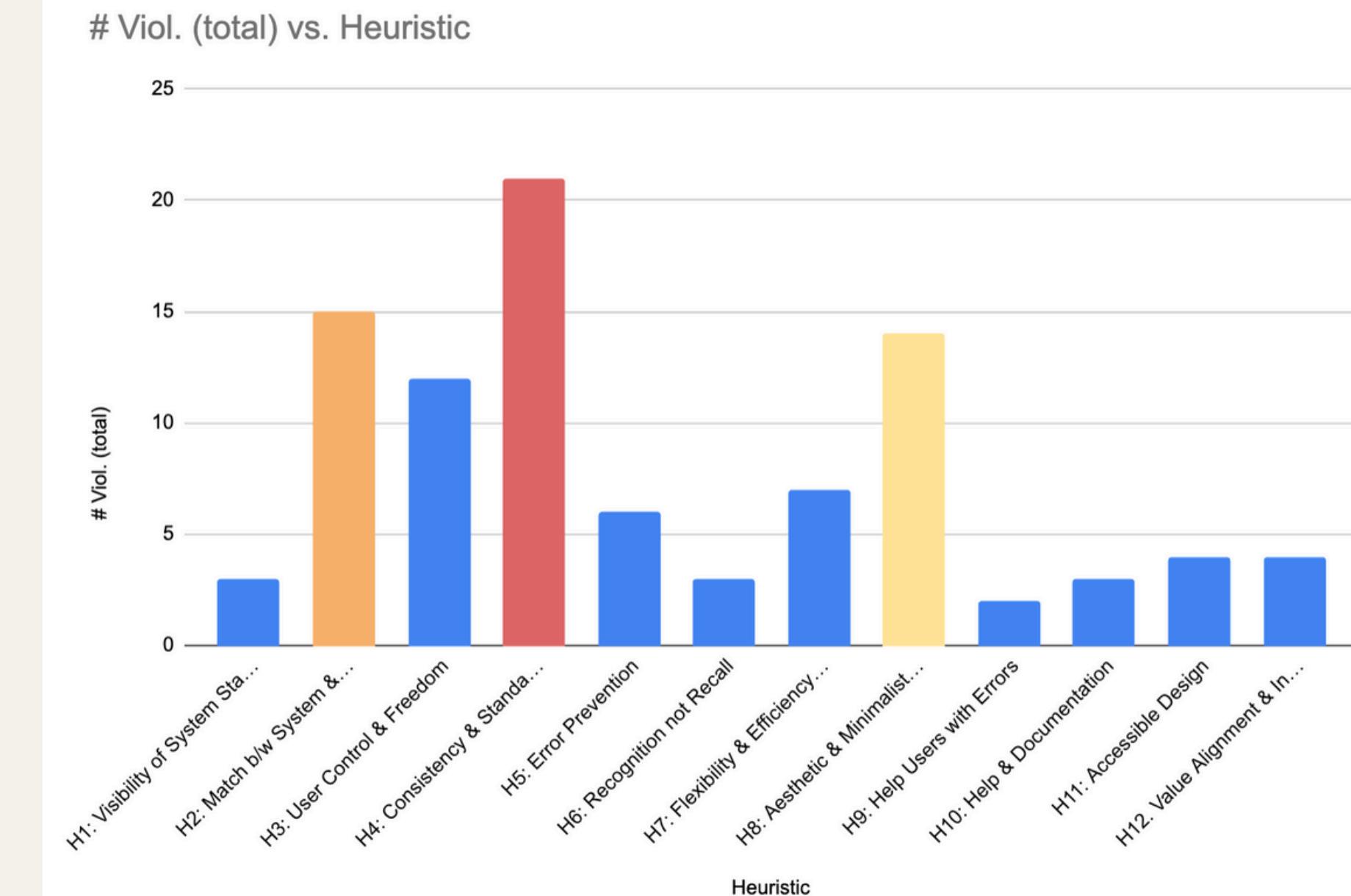
COMPLEX

Have AI-powered tools that
make generate insights on
student progress and give
actionable recommendations

Heuristic evaluation results

High-level overview

- 94 total violations
- Most frequent heuristics violations
 - H4: Consistency & Standards - 21
 - H2: Match b/w System & World - 15
 - H8: Aesthetic & Minimalist Design - 14
- 28 Severity 3 + 4 issues
 - 26 Severity 3 issues
 - 2 Severity 4 issues



Broad violation patterns

1. The UI is not aesthetically matching for an education app
2. Terminology is inconsistent across tasks and was not abundantly clear to users what they meant, e.g. classes vs. sessions
3. Some screens are too cluttered, making navigation difficult
4. Navigation bar titles do not match with page headings

Major product
& UI revisions

Usability goals

Usability Goals & Key Measurements

	Intuitive	Efficient
Explanation	Want the UI to be easily understandable so that first-time users can enjoy it as well as power users	Counselors can perform different tasks quickly, which boosts their productivity
Key Measurement	Number of times the user presses the back button	Time spent on a particular task
We want the measurement to be	Reduced	Reduced

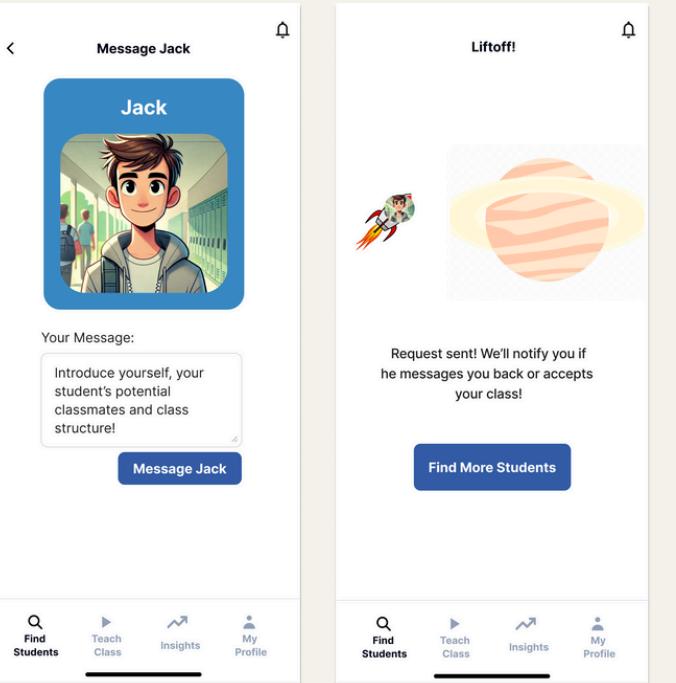
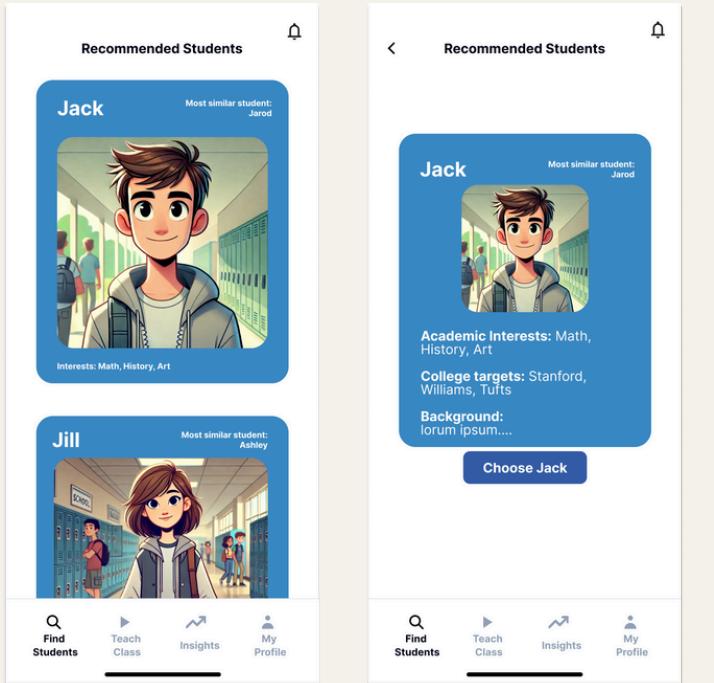


Changes at a glance

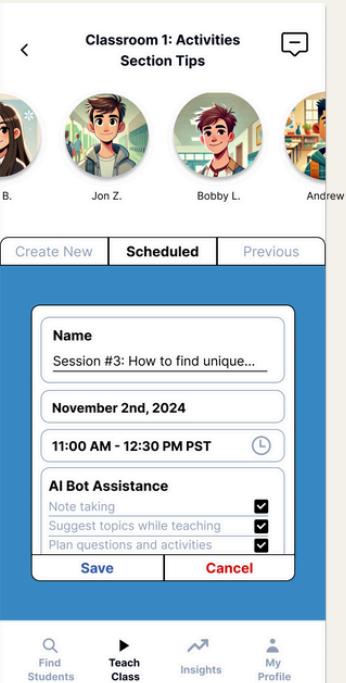
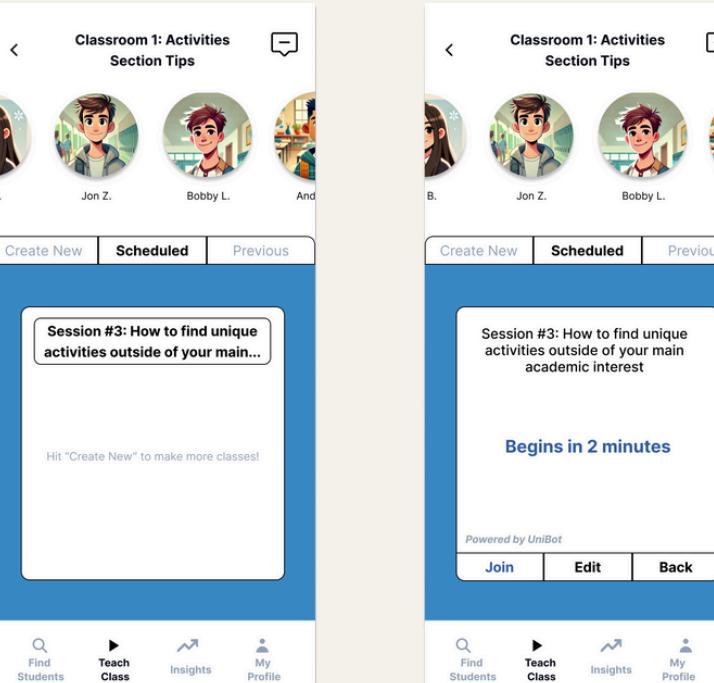


Before: 3 tasks (key frames)

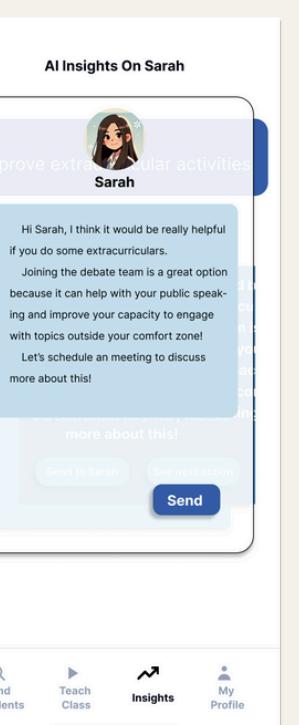
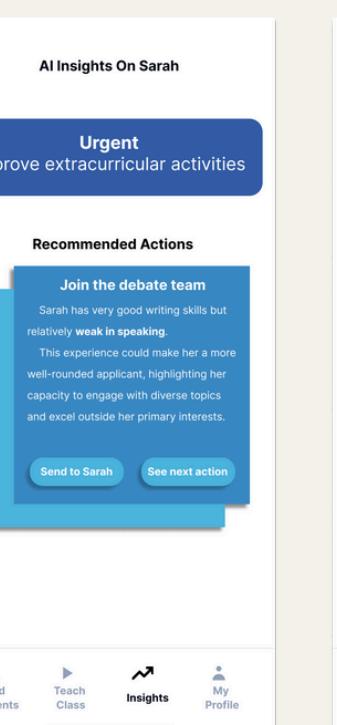
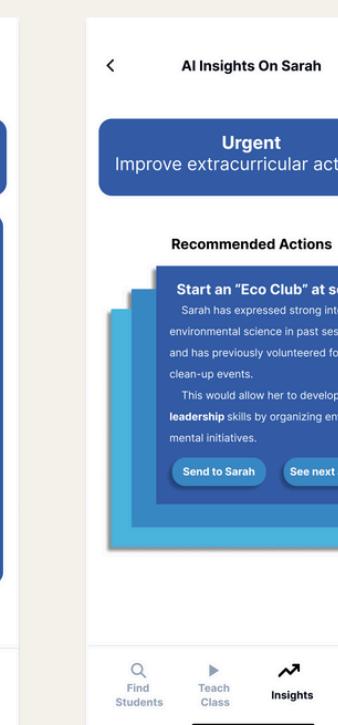
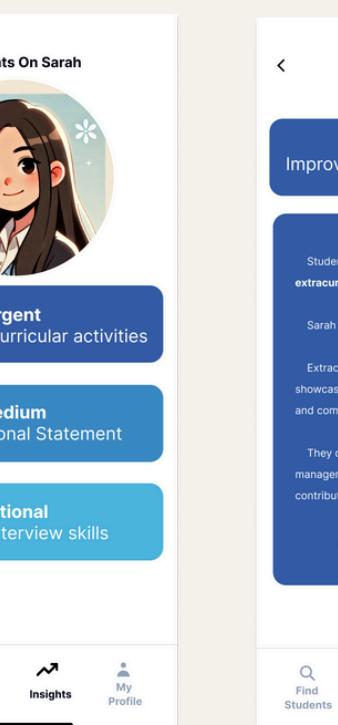
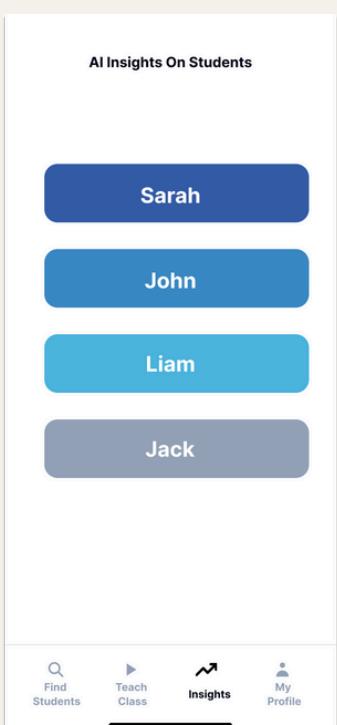
SIMPLE



MODERATE

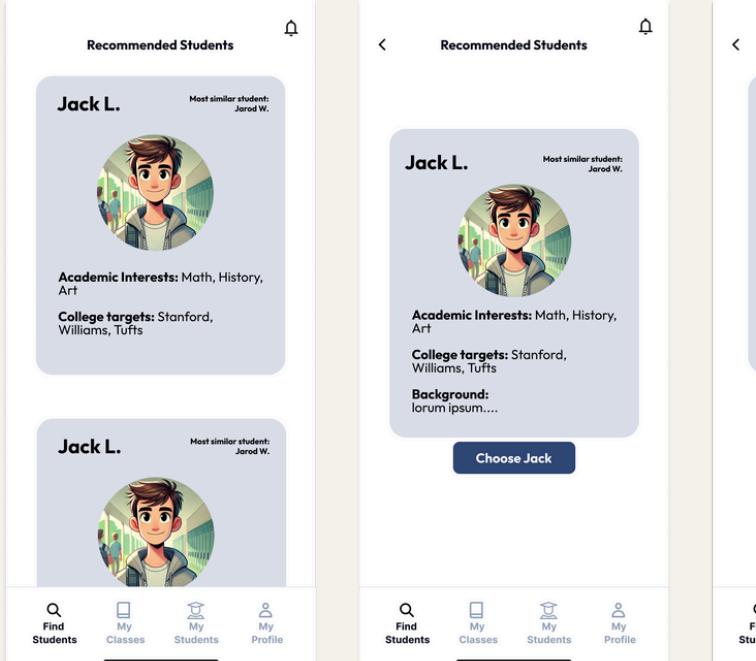


COMPLEX

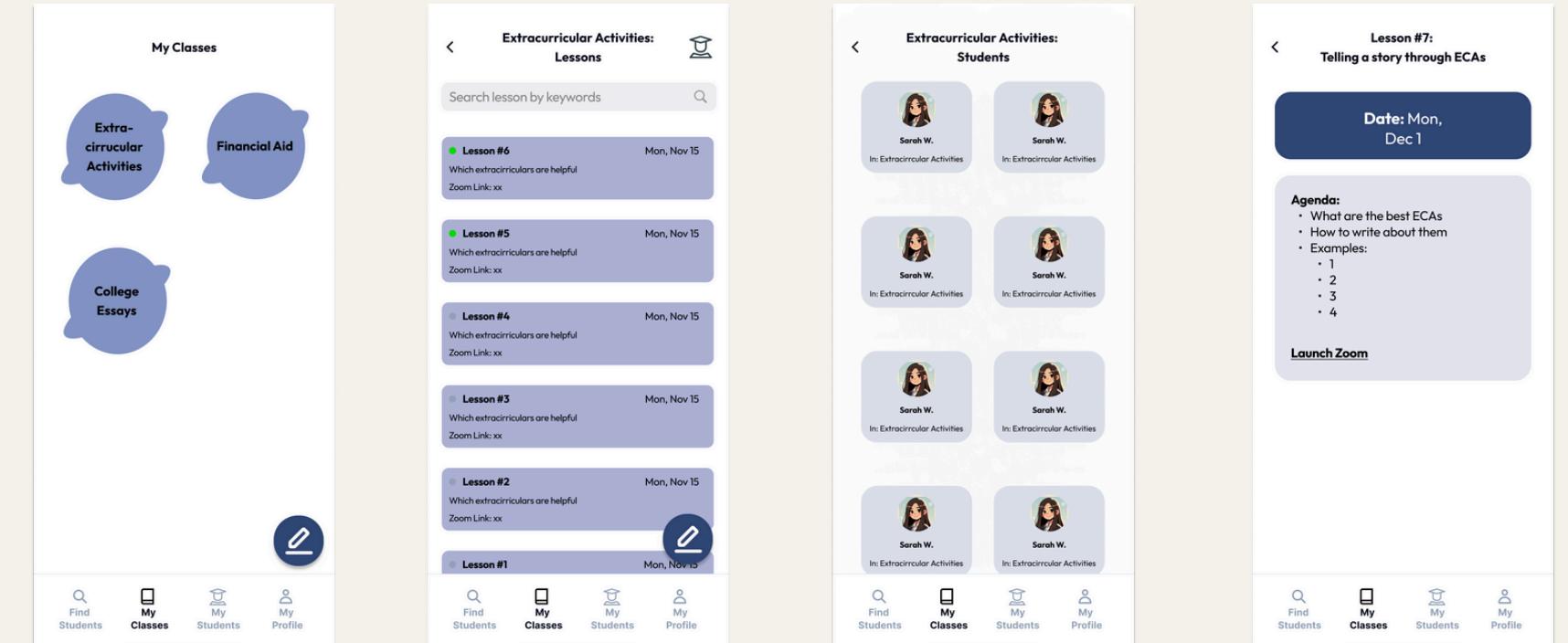


After: 3 tasks (key frames)

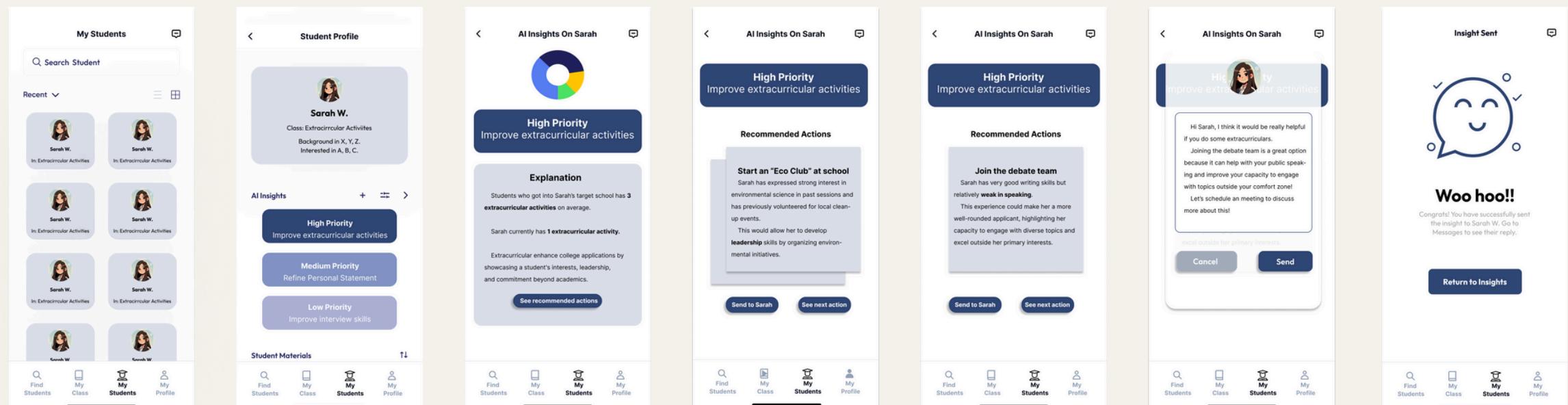
SIMPLE



MODERATE



COMPLEX





Specific changes & rationale

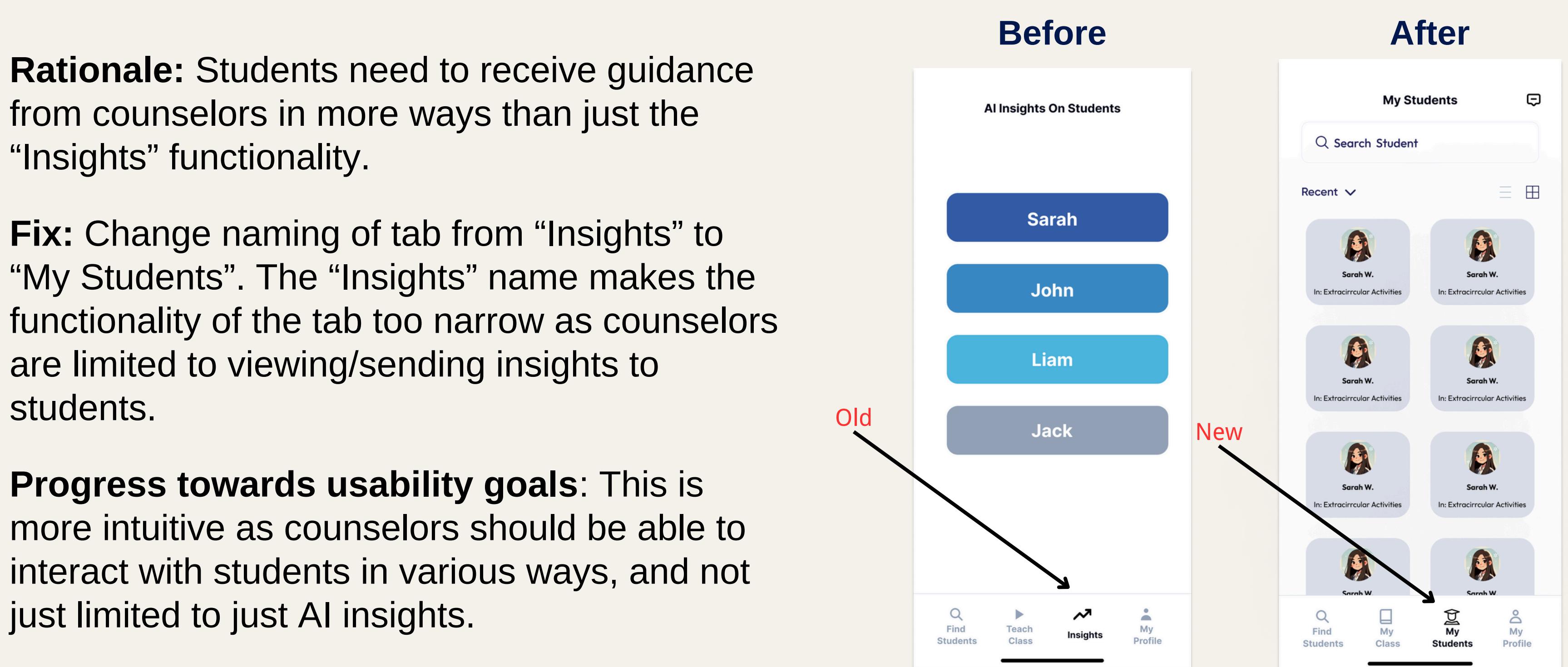
Severity 4

H3- No way to engage with students beyond insights

Rationale: Students need to receive guidance from counselors in more ways than just the “Insights” functionality.

Fix: Change naming of tab from “Insights” to “My Students”. The “Insights” name makes the functionality of the tab too narrow as counselors are limited to viewing/sending insights to students.

Progress towards usability goals: This is more intuitive as counselors should be able to interact with students in various ways, and not just limited to just AI insights.



Severity 4

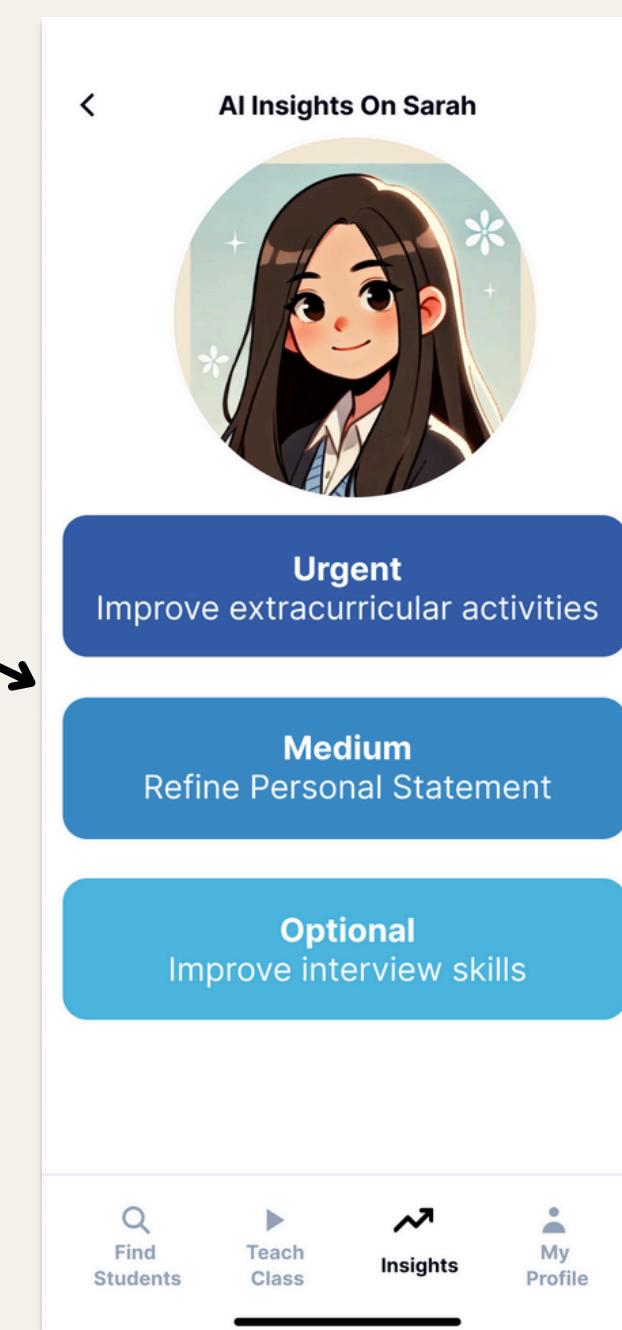
H12- Some students might not consent the AI to access their information

Rationale: Did not take into account that some students can refuse allowing AI access to their information, which means there won't be any AI insights generated.

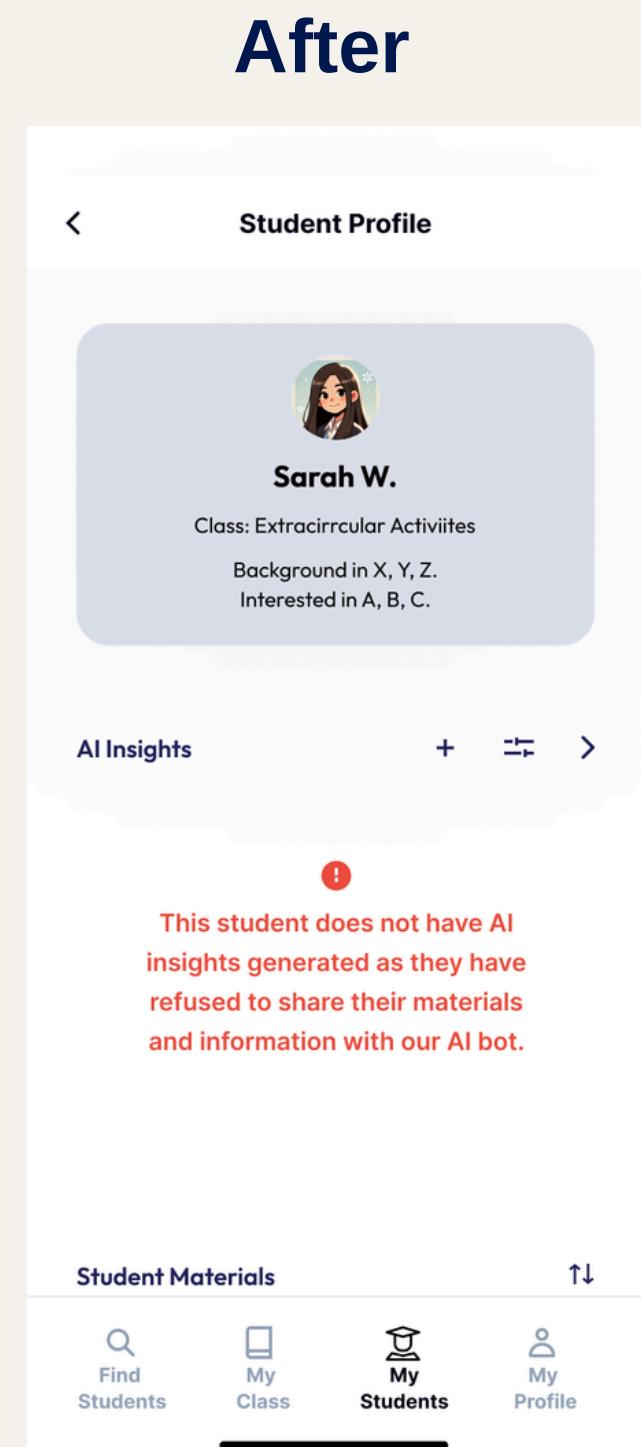
Fix: Give students the choice to refuse access on their end (not implemented in our counselor-focused interface). When the counselor clicks on a student who did not consent to AI use, show an error messages explaining this.

Progress towards usability goals: Counselors are updated quickly on the absence of AI insights, and the clear error messages tell them the reason behind the absence - which improves intuitiveness. It also generally makes the app more inclusive.

No option
for
students
to refuse
AI access



Before



After

Severity 3

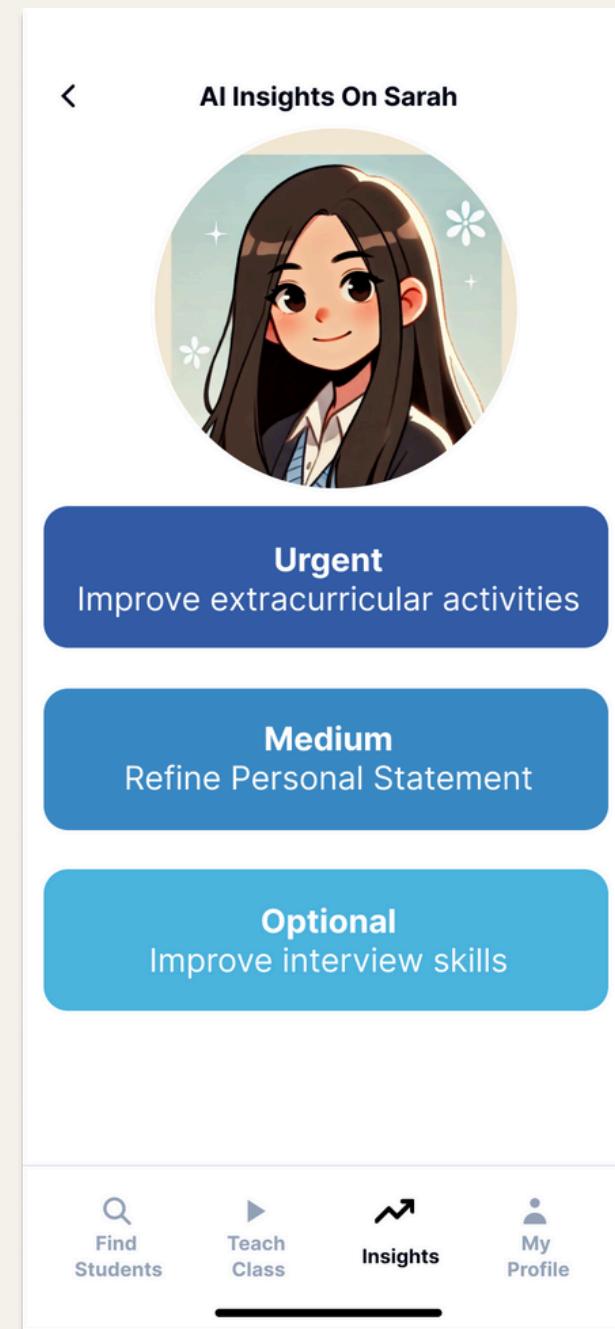
H2 - Within each student's AI insights, the descriptions of "Urgent", "Medium", and "Optional" are unclear.

Rationale: The urgency of tasks should be communicated differently and consistently. Just saying "Urgent" can cause confusion.

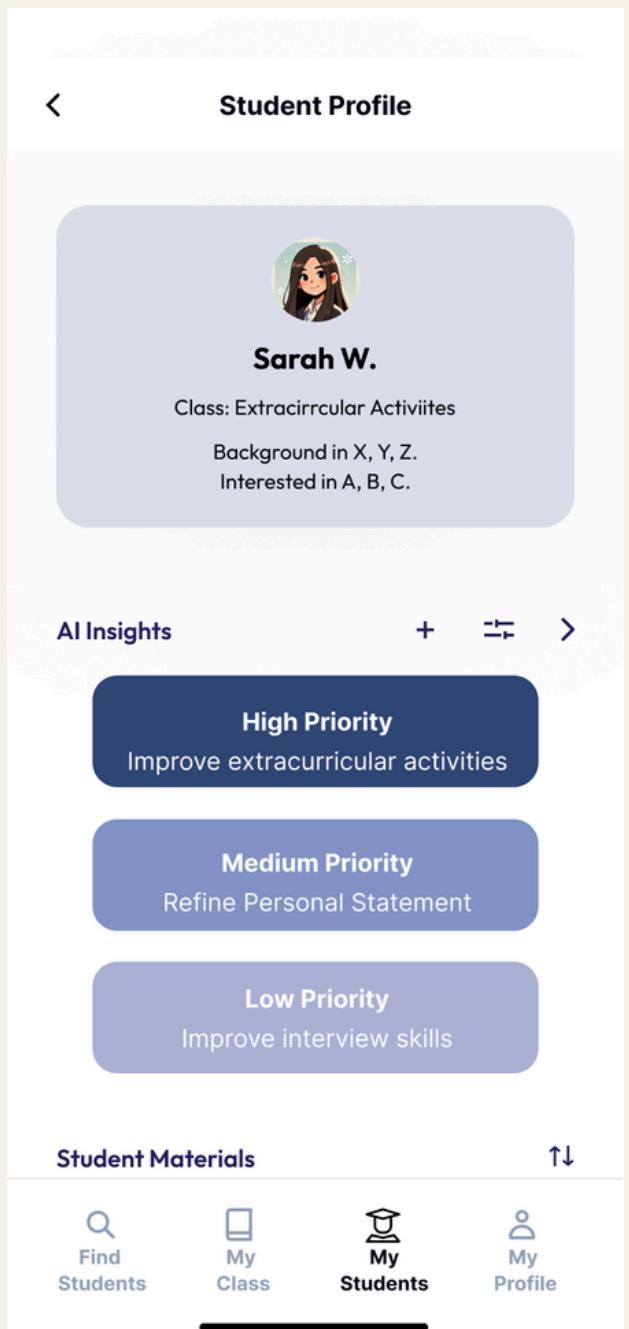
Fix: Change the labels to "High priority", "Medium priority", and "low priority" to explicitly let users know the ratings have to do with priority.

Progress towards usability goals: Improves intuitiveness as users no longer have to guess what "high," "medium," etc. are in regards to.

Before



After



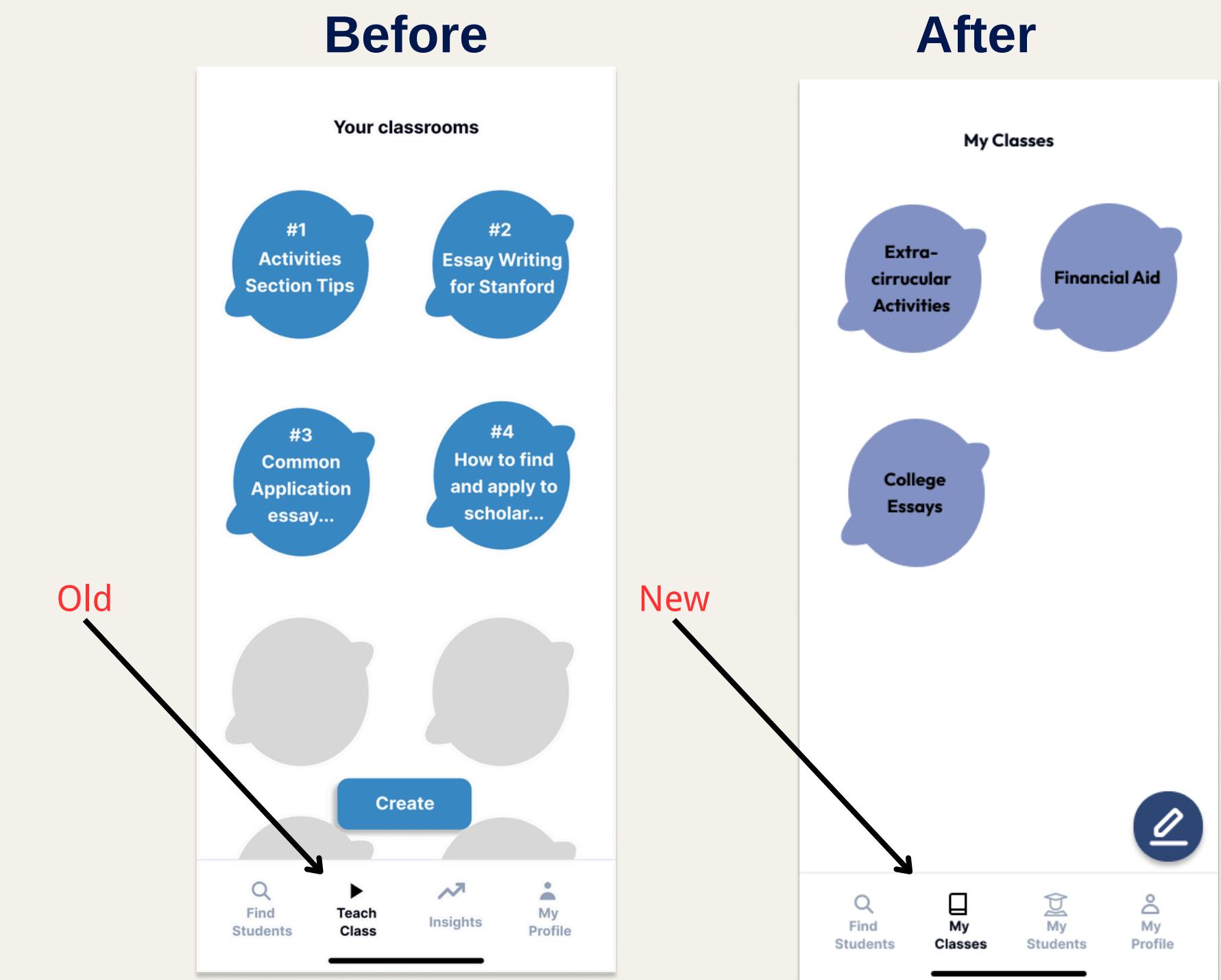
Severity 3

H2 - The image for the teach class tab does not convey its functionality

Rationale: It is currently a play button which suggests video recordings, but the function has more to do with teaching a group of students.

Fix: Change the icon to something more fitting - the icon of a textbook.

Progress towards usability goals: Improves intuitiveness as users can learn more about what the “Teach Class” tab offers visually in addition to having the text to guide them.



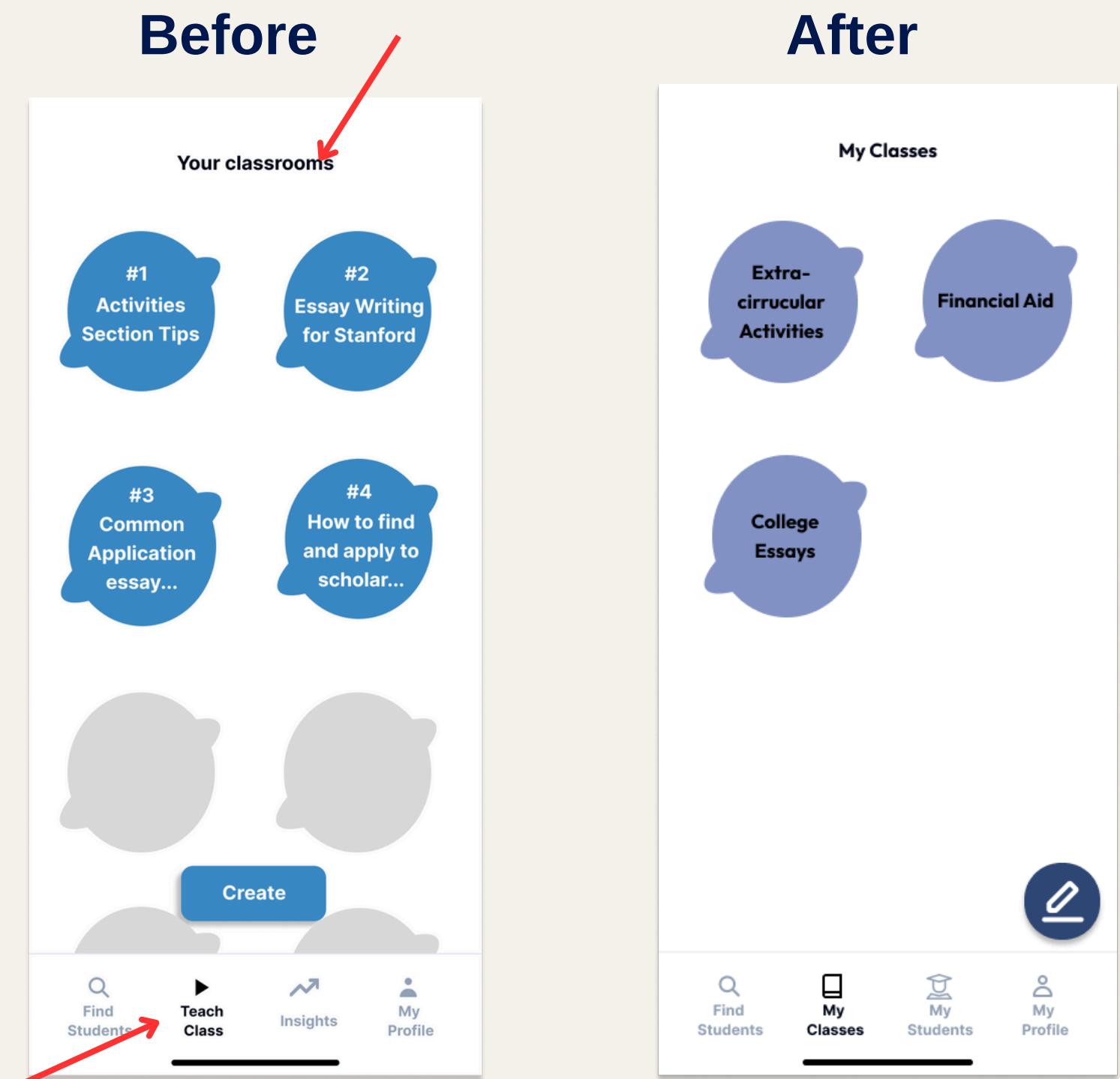
Severity 3

H4 - Unclear if there is a difference between class and classrooms

Rationale: The navbar name does not match the page heading. For instance, On the "Teach Class" page, it says "Your Classrooms". Inconsistent terms might signal to users that they mean different things.

Fix: Have terminology consistent, especially if it is a recurring concept throughout the app.

Progress towards usability goals: Improves efficiency as users will not be confused about where they are in the navigation progress as the feedback they get matches their expectations.



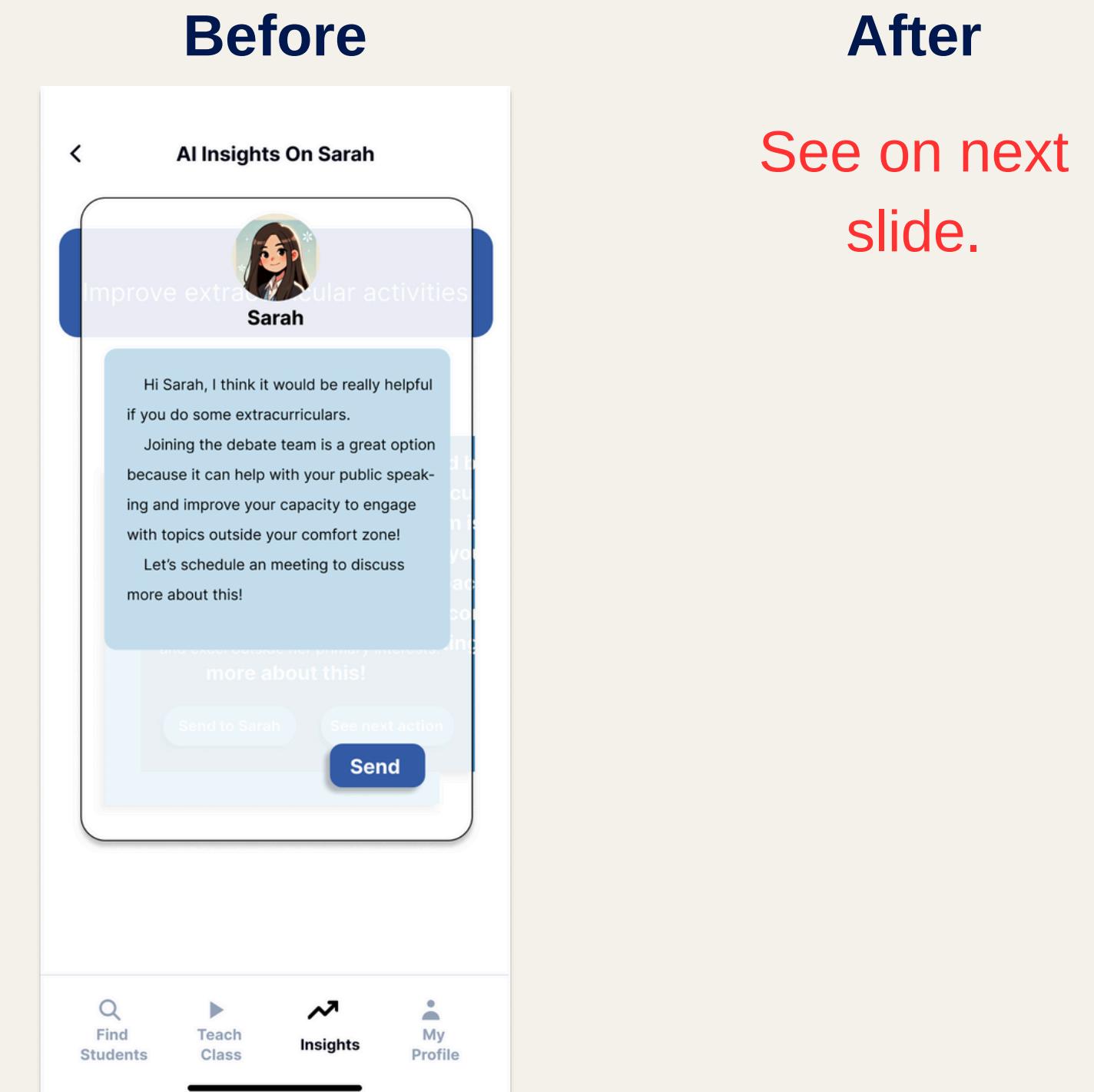
Severity 3

H7 - No option to return to insights after sending an actionable step

Rationale: Once sending a message to a student regarding an insight, the user is returned to the insight that they were just looking at. There should be an option to return to the insights page where they just were.

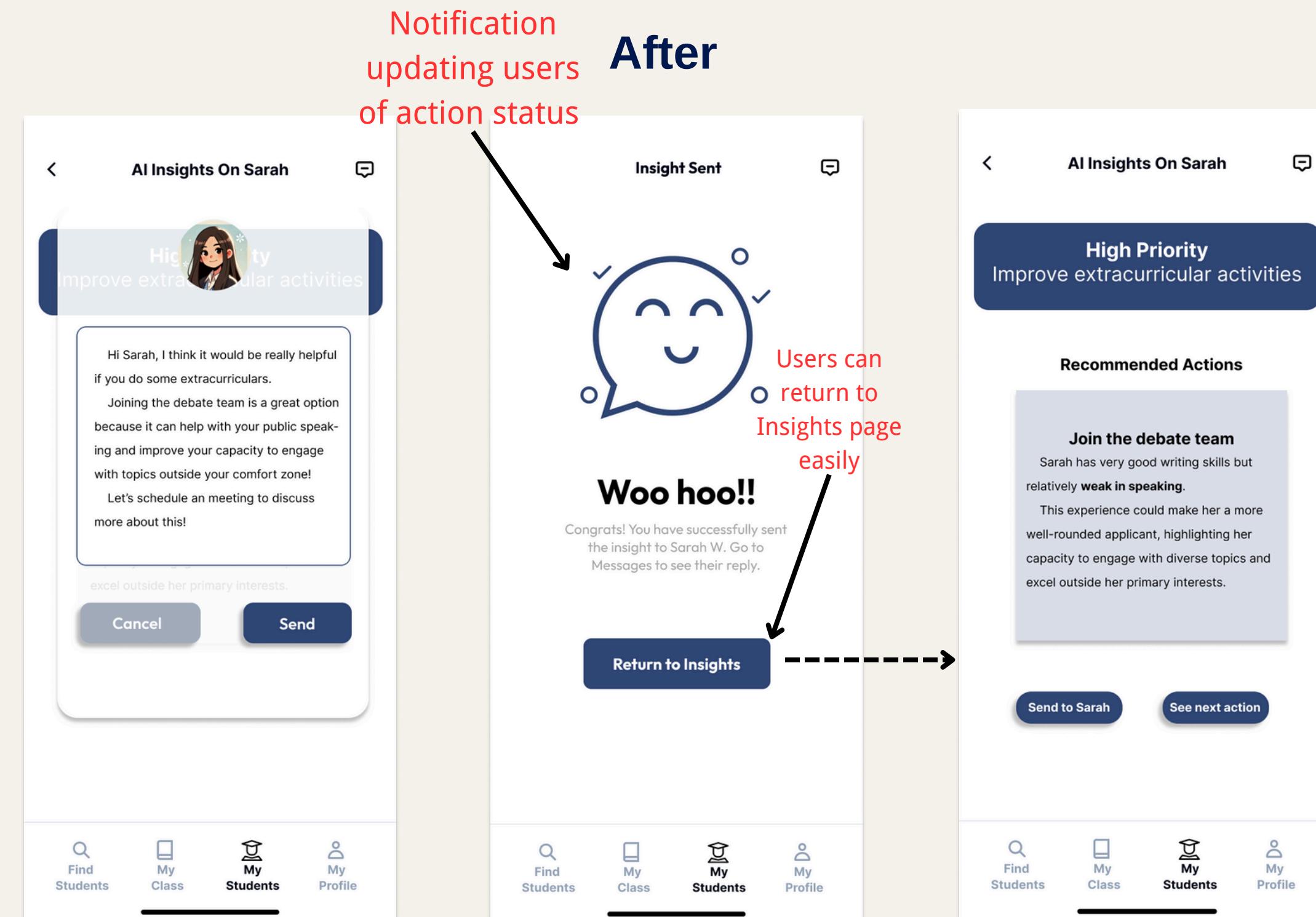
Fix: Add a notification to let the counselor know their insight/actionable step has been sent, and add a button to allow them to return to the insights page.

Progress towards usability goals: Improves efficiency as users can navigate back to where they came from after completing the action. Improves intuitiveness as the notification updates the status of the user's actions.



Severity 3

H7 - No option to return to insights after sending an actionable step



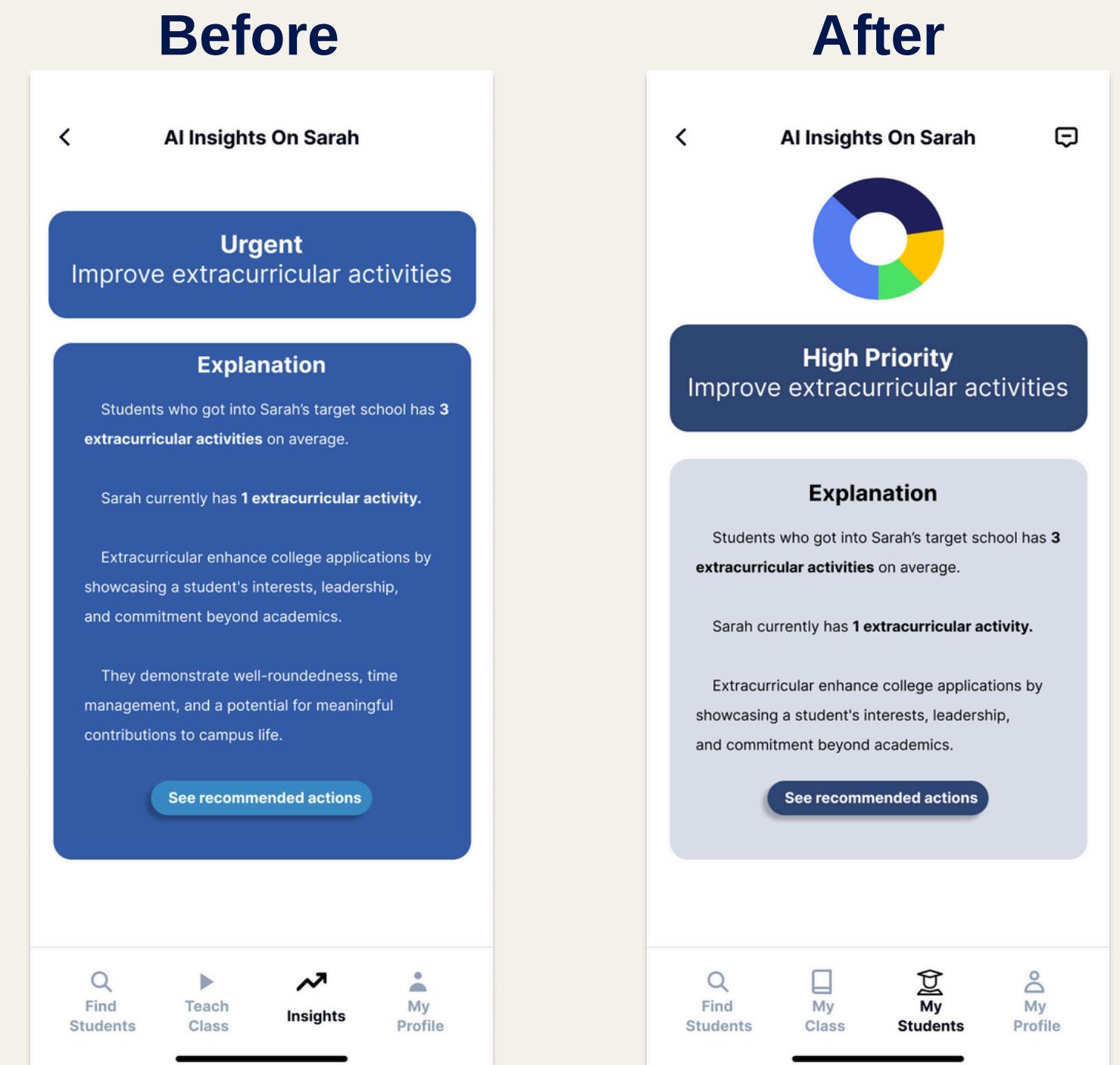
Severity 3

H8 - Insights page is too text-heavy

Rationale: The insights page is too filled with text, and both sections sharing the same background color makes it hard to differentiate them.

Fix: Break up text more with some images/data to support the insight visually, and use different colors to separate the insight with the explanation.

Progress towards usability goals: Improves intuitiveness as the contrast in colors (e.g. the navy of the first section) guides the user first read the insight section, then look at the explanation section, which is the logical flow.



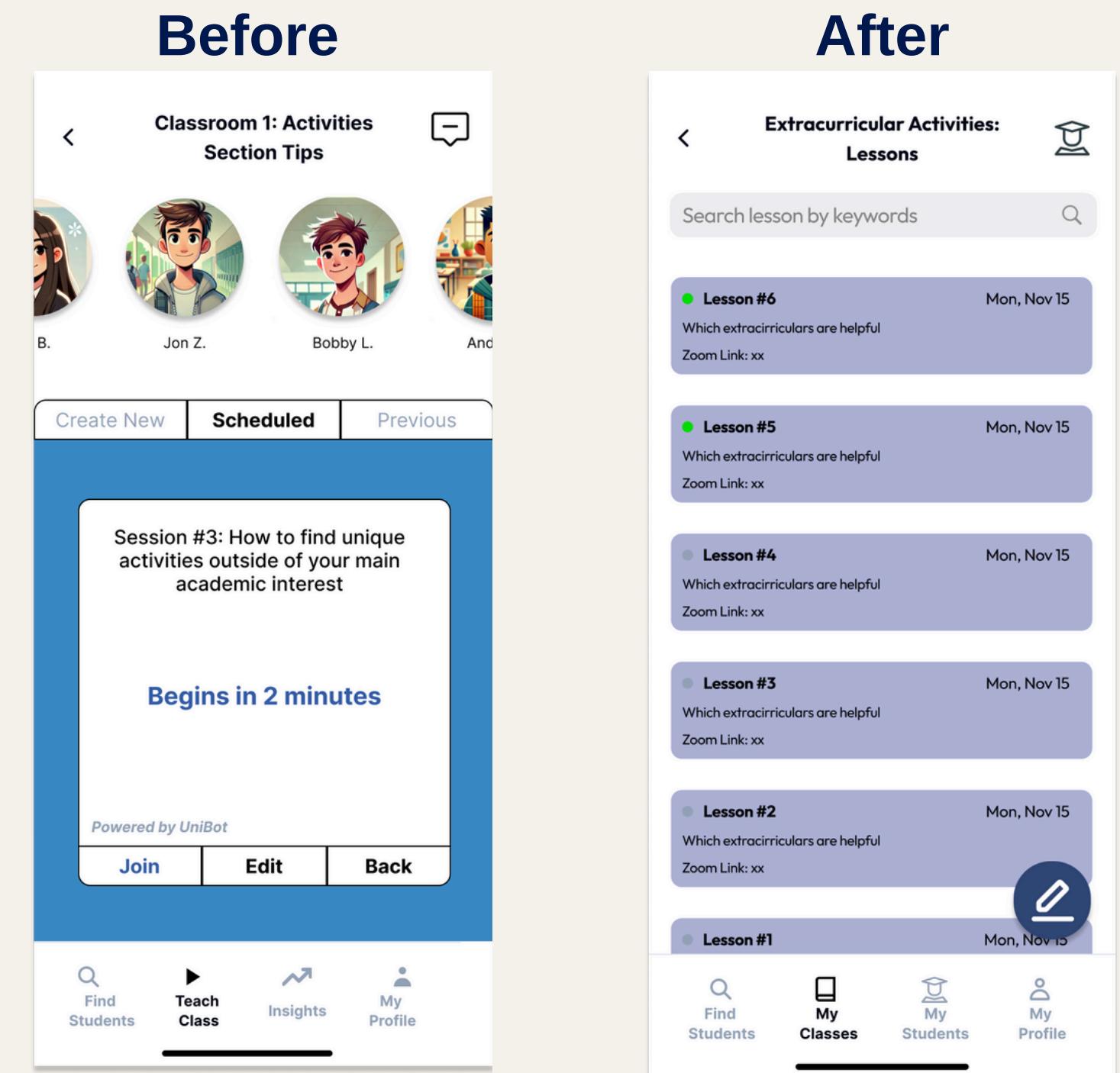
Severity 3

H8 - Clean and spacious design is better

Rationale: The layout of the medium task screen is too complicated, with too many options presented to the user at once.

Fix: Make sessions a list format where the most recent sessions are at the top and the least recent sessions are at the bottom.

Progress towards usability goals: Improves efficiency as users do not have to navigate to different tabs to see past/upcoming sessions. This can be achieved by scrolling, and the search bar makes finding a specific session even easier.



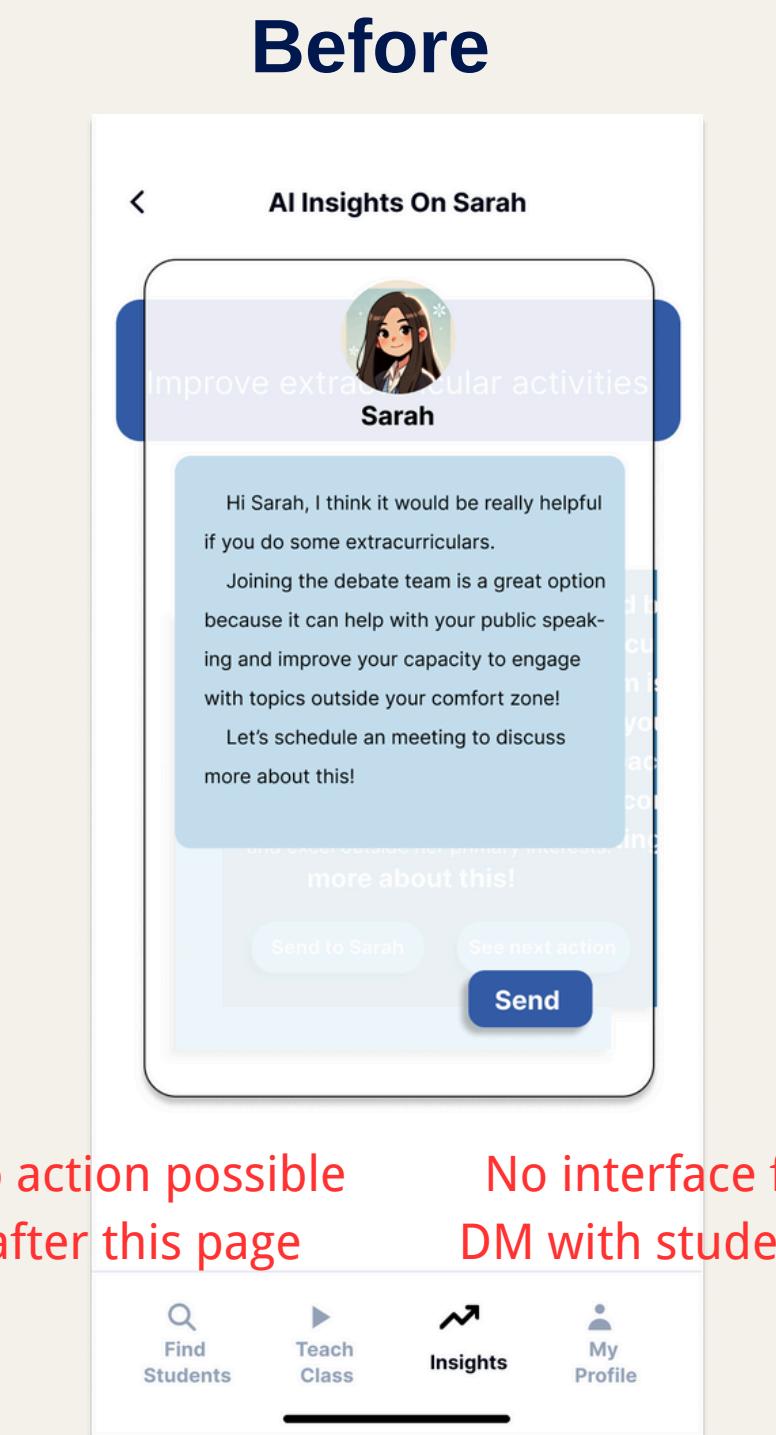
Severity 3

H12- No way to build long-term relationships with students

Rationale: In the old UI, the only way for students to individually interact with the counselor is through AI-generated recommendations (outside of lesson settings).

Fix: Added message functionality where a counselor can chat with students 1-on-1 and can see the students' response to the insights.

Progress towards usability goals: This is more intuitive as counselors should be able to communicate with students outside of the lesson format.



After
See next slide

Severity 3

H12- No way to build long-term relationships with students

Access messages interface

The image shows a sequence of four mobile application screens:

- AI Insights On Sarah**: A modal window titled "AI Insights On Sarah" displays a message card for "Sarah W.". The message reads: "Hi Sarah, I think it would be really helpful if you do some extracurriculars. Joining the debate team is a great option because it can help with your public speaking and improve your capacity to engage with topics outside your comfort zone! Let's schedule a meeting to discuss more about this!" Below the message are two buttons: "Cancel" and "Send".
- Insight Sent**: A confirmation screen titled "Insight Sent" features a large blue speech bubble icon with a checkmark inside. Below it, the text "Woo hoo!!" is displayed, followed by the message: "Congrats! You have successfully sent the insight to Sarah W. Go to Messages to see their reply." At the bottom is a "Return to Insights" button.
- Messages**: A list of messages from "Sarah W." showing repeated inquiries about resources. The messages are timestamped at 14:32. The interface includes navigation icons for "Find Students", "My Class", "My Students", and "My Profile".
- Sarah W.**: A messaging screen with "Sarah W." as the recipient. It shows a message from the user: "Hi Sarah, I think it would be really helpful if you do some extracurriculars...." and a response from Sarah: "Thank you! that's helpful! Can you elaborate more? For example, are there any helpful resources you can give me to get started?" The interface includes a message input field with a microphone icon and a "Type a message" placeholder.

Insights immediately sent to student

Students can respond to insight

Severity 2

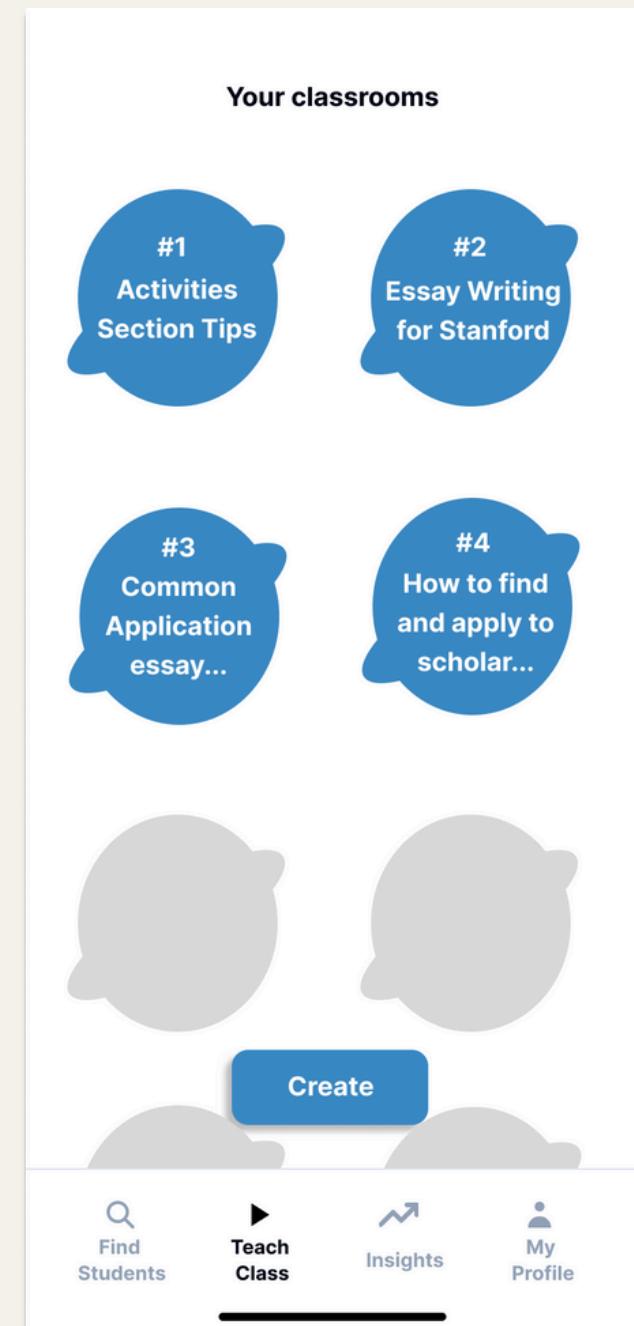
H8- Font does not match theme of edtech app

Rationale: The font is very standard and does not hint at what field the app is in.

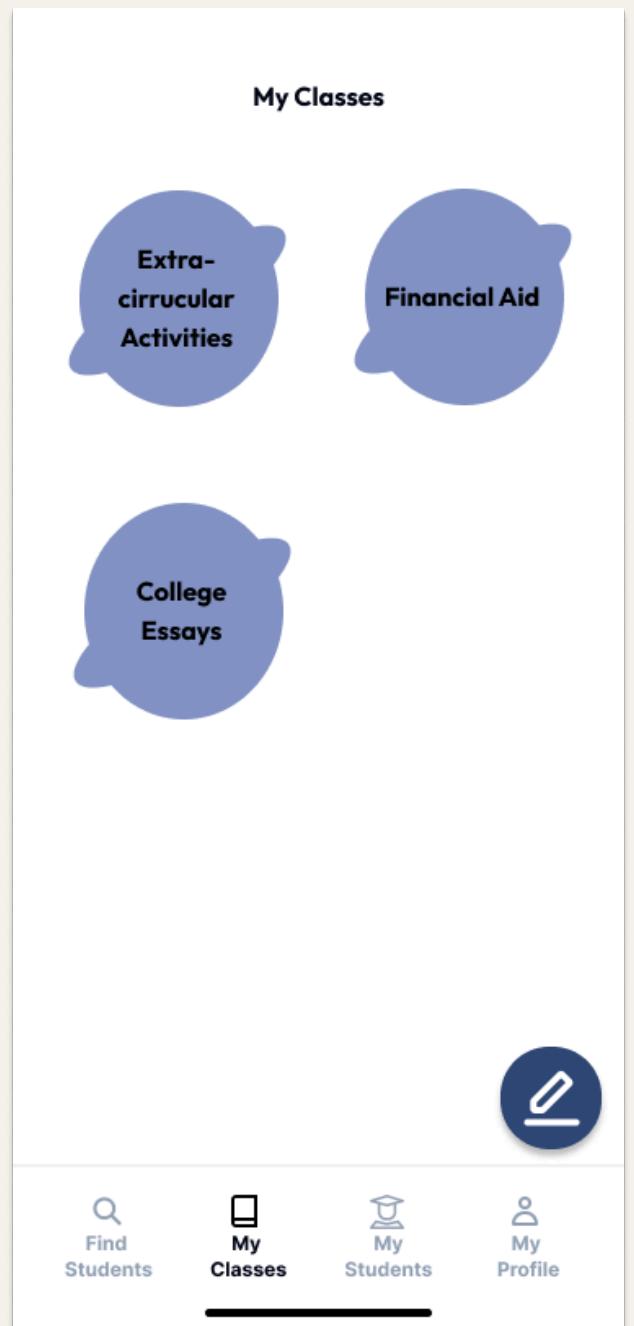
Fix: Change the font from the default to a more lively font (“Outfit”).

Progress towards usability goals: Improves overall user experience as it makes the app more enjoyable visually, but also improves the intuitiveness of the app’s interface.

Before



After



Prototype implementation

Tools we used & plan to use

We have used these tools so far:

1. React Native
2. Expo
3. Vscode
4. Figma

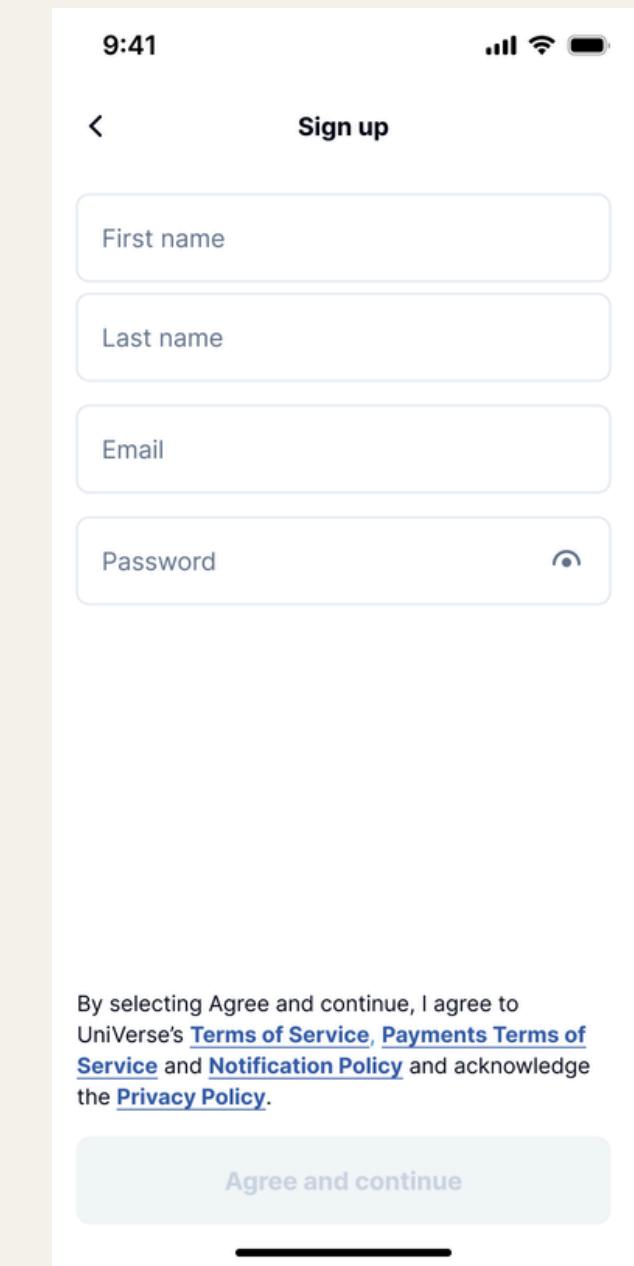
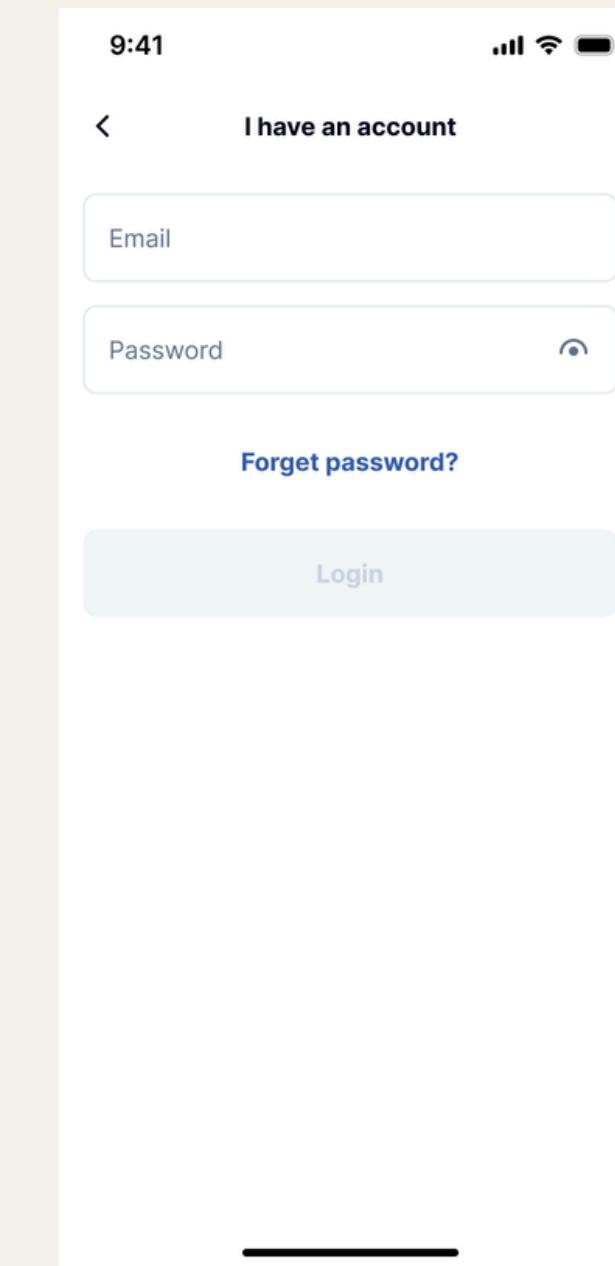
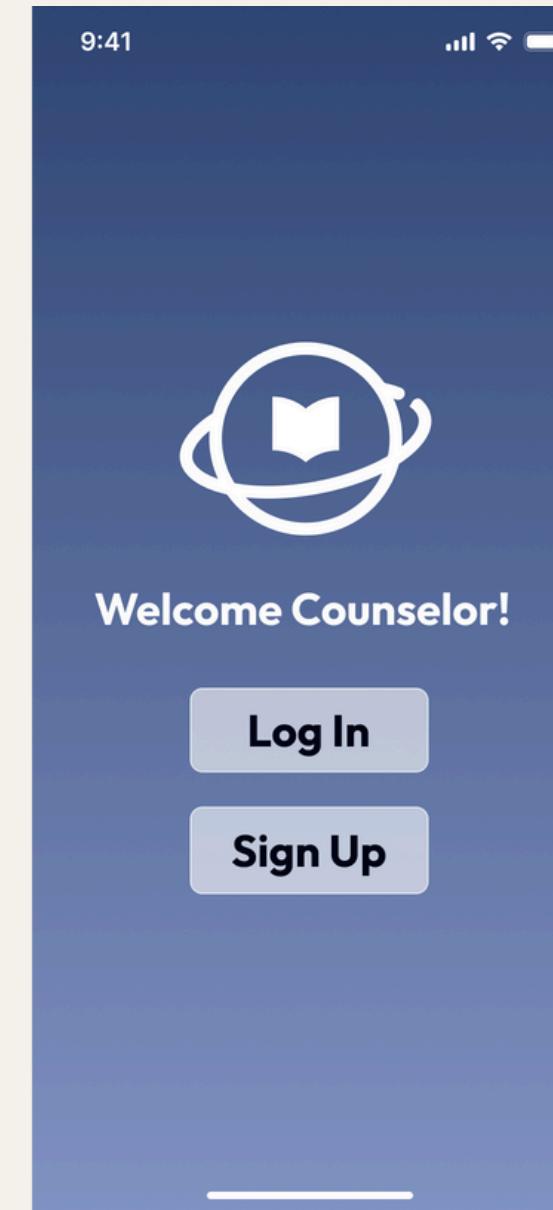
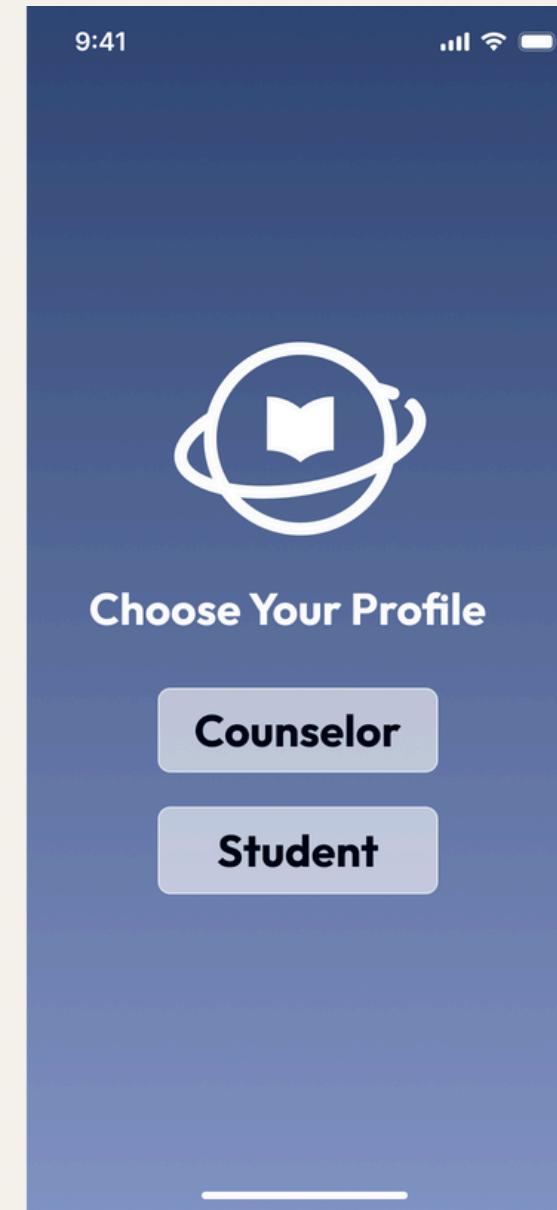
We plan to also use these tools going forward:

1. Supabase
2. Gemini

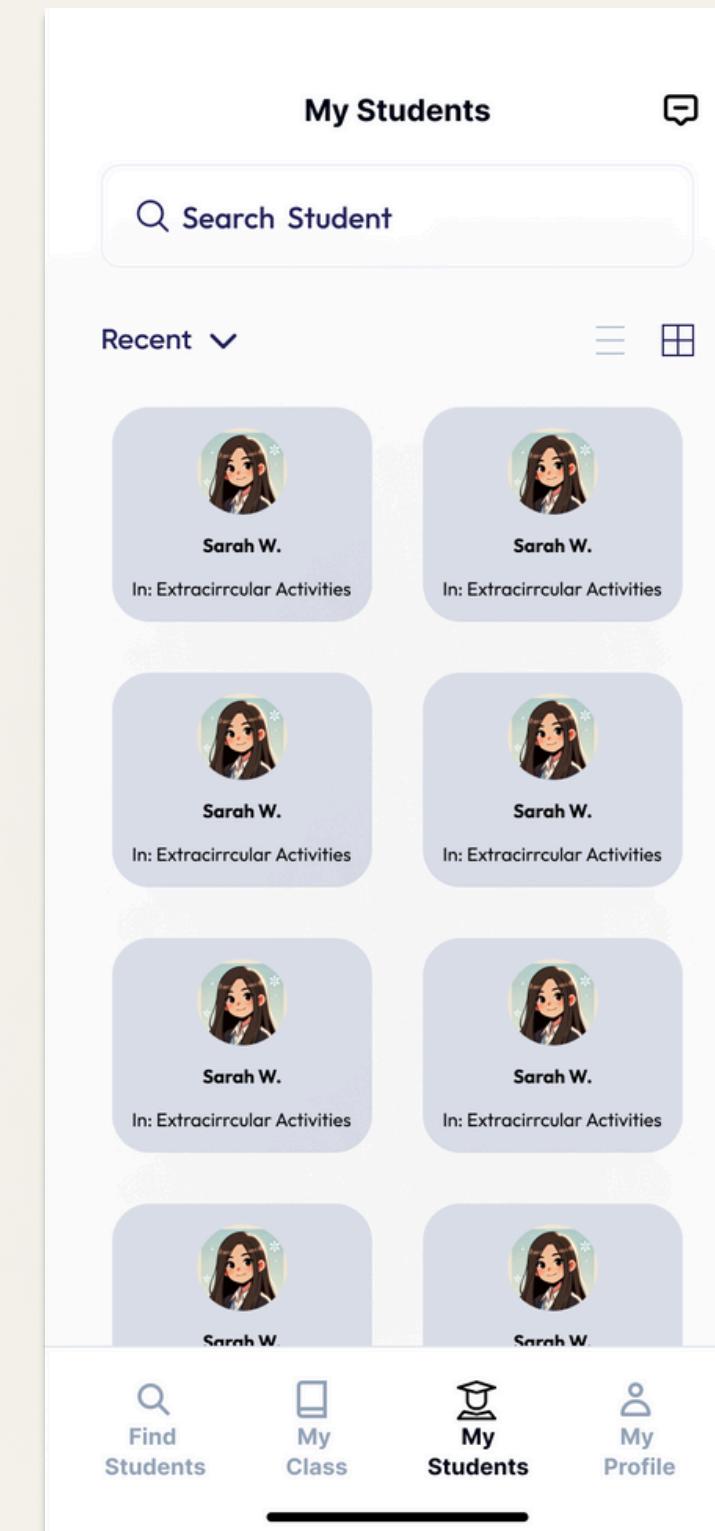
Features implemented so far

1. Login/Sign Up flow
 - a. User signs in as counselor
 - b. User can choose to login/sign up
2. Navbar
3. **Complex** task
 - a. My students page
 - b. Students Profile
 - c. AI insights on [student name]
 - i. View recommended actions
 - ii. Sent insight & action to student
 - iii. Alert of action being successful

Features implemented - log in/sign up



Features implemented - navbar



Features implemented - complex task

The screenshots illustrate the implementation of AI-driven student insights across five screens:

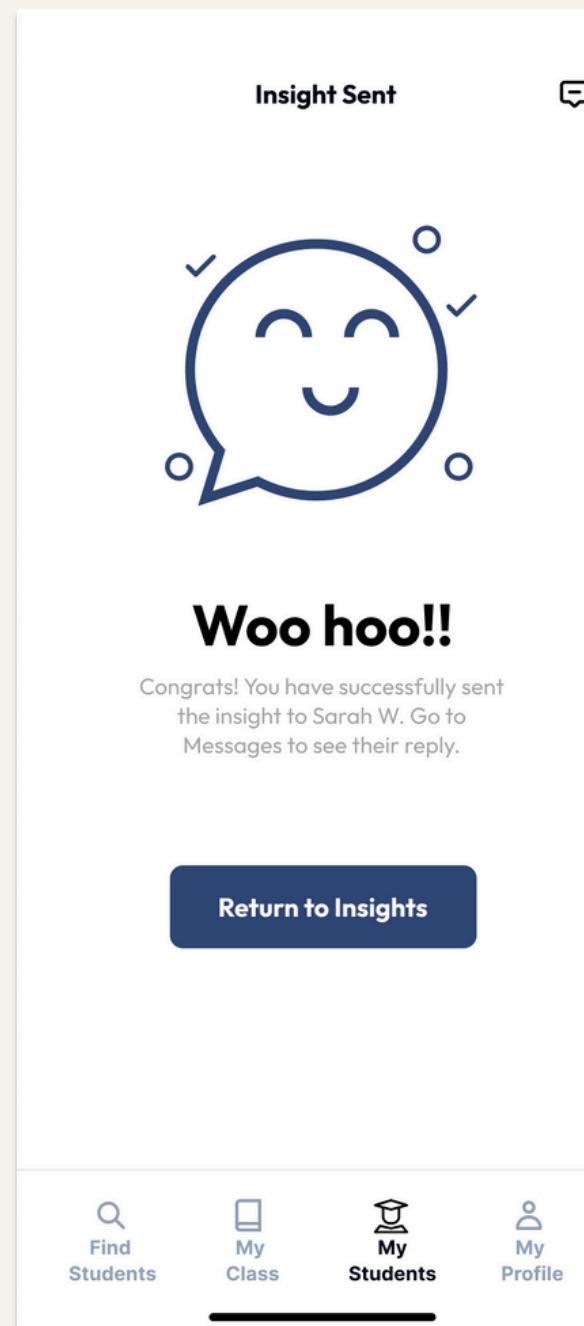
- My Students:** Shows a search bar and a list of recent students, including Sarah W. (In: Extracurricular Activities). A sidebar displays AI Insights for Sarah W., categorized into High Priority, Medium Priority, and Low Priority.
- Student Profile:** Displays detailed information for Sarah W., including her class (Extracurricular Activities), background (X, Y, Z), and interests (A, B, C). It also shows the AI Insights section from the previous screen.
- AI Insights On Sarah:** A summary screen for Sarah W. It features a pie chart, a "High Priority" callout (Improve extracurricular activities), an "Explanation" section, and a "Recommended Actions" section.
- AI Insights On Sarah:** A detailed view of the "High Priority" recommendation. It suggests starting an "Eco Club" at school, noting Sarah's interest in environmental science and leadership skills.
- AI Insights On Sarah:** Another detailed view of the "High Priority" recommendation, suggesting Sarah join the debate team due to her writing skills and weak speaking abilities.

Features to be implemented

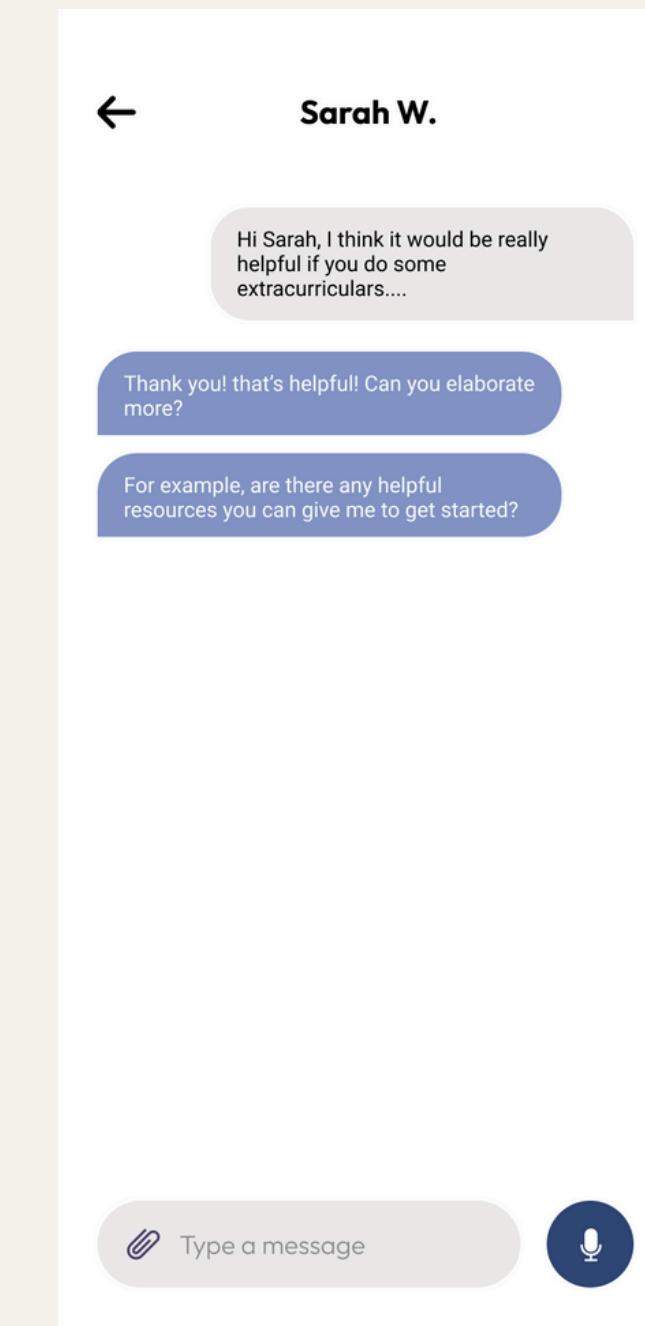
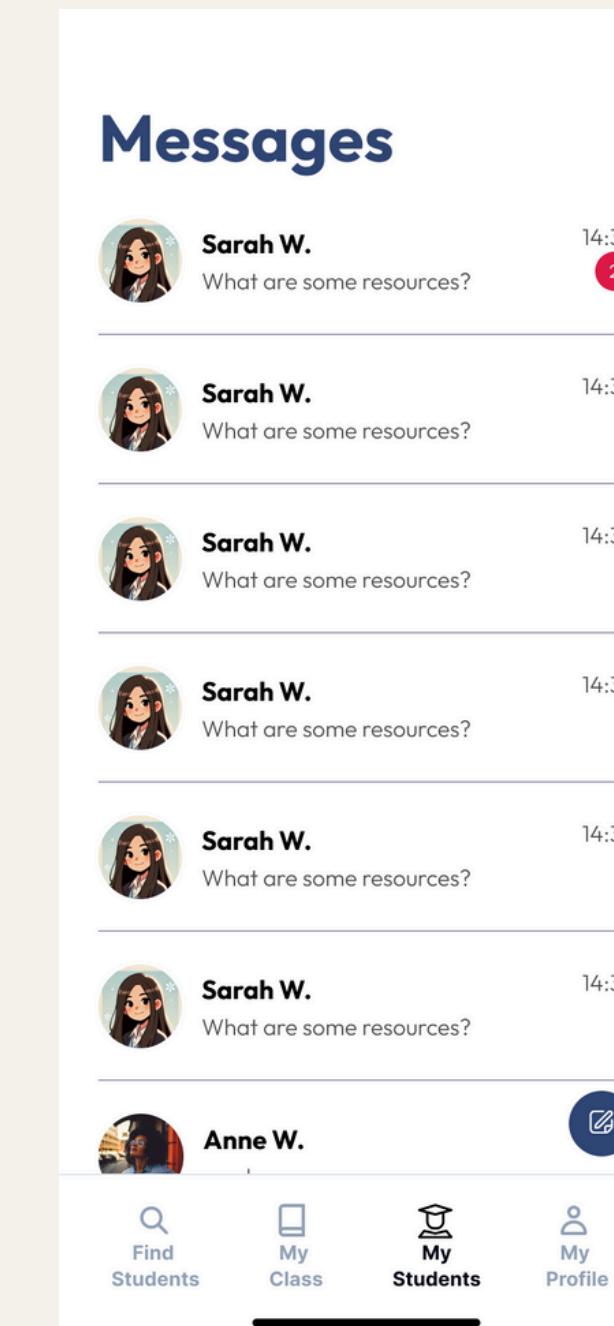
1. Log in/sign up flow user input logic
2. **Simple** task
3. **Medium** task
4. Finish off **complex** task
 - a. Notifications page instead of just having an alert
 - b. New chat interface (due to heuristic feedback)
 - c. *Optional: use Gemini in generating AI insights*
5. Profile page

Features to be implemented (Re: complex)

1. NOTIFICATION PAGE

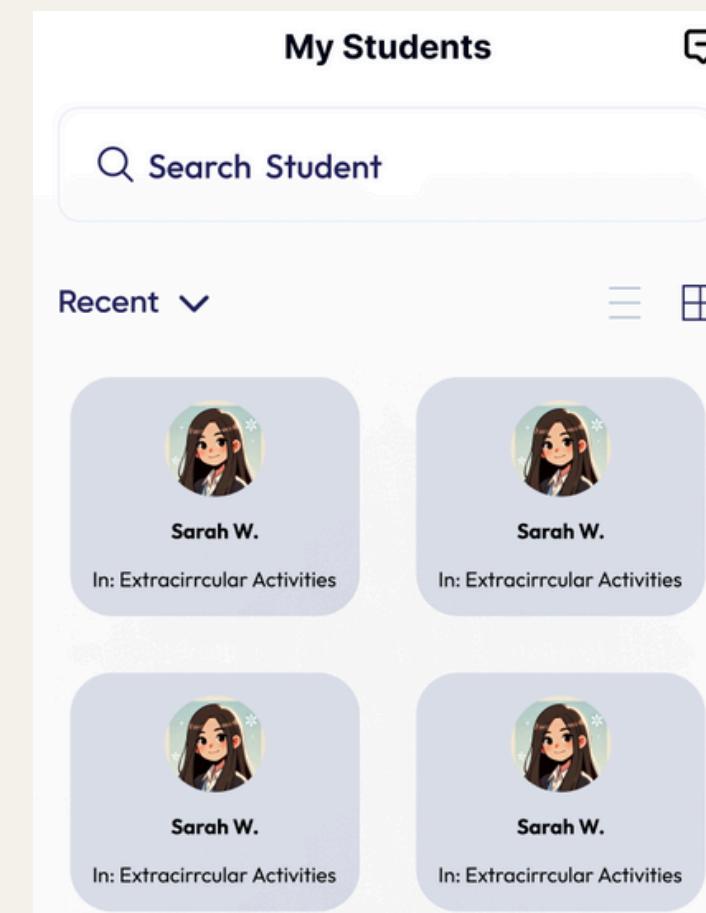


2. CHAT INTERFACE



Wizard of Oz Features

- User input in log in/sign up flow is bypassed
- We showed that the counselor has a number of students to start with, so they can view AI insights for the selected student
 - In theory, the counselor can be a first-time user with no existing students



Hard Coded Items

- We created students and their profiles so the counselor would have people to work with
- All the “AI” insights, recommended actions, and the message are written by us (the “counselor”) are pieces of content we wrote to demonstrate functionality.

The image shows a digital interface for a student named Sarah W. The top section displays her profile picture, name, class (Extracurricular Activities), and background information (Background in X, Y, Z; Interested in A, B, C). Below this, the "AI Insights" section lists three items: "High Priority" (Improve extracurricular activities), "Medium Priority" (Refine Personal Statement), and "Low Priority" (Improve interview skills). To the right, a "Recommended Actions" section provides a detailed plan to start an "Eco Club" at school, mentioning her interest in environmental science and previous volunteer work, and how it will develop leadership skills.

Sarah W.
Class: Extracurricular Activities
Background in X, Y, Z.
Interested in A, B, C.

AI Insights + - >

High Priority
Improve extracurricular activities

Medium Priority
Refine Personal Statement

Low Priority
Improve interview skills

Recommended Actions

Start an “Eco Club” at school
Sarah has expressed strong interest in environmental science in past sessions and has previously volunteered for local clean-up events.
This would allow her to develop **leadership** skills by organizing environmental initiatives.

Questions

- What are some “must-haves” features in our profile page given the rest of our app?
- How should we demonstrate adding a student who just accepted the counselor’s request to a class? Where does it fit in to our current interface?
- Should we give counselors full control over modifying classes/lessons/students?

Plans to finish

Overall, we plan to each tackle a portion of the remaining features simultaneously and help each other as needed. We all plan on creating/sharing components to reuse. We had a hackathon earlier this week and found it helpful, so we plan to have hackathon(s) closer to the deadline to connect all flow together.

1. Finish Log in/sign up flow user input logic - **Eric**
2. **Simple** task - **Sally**
3. **Medium** task - **Steve**
4. Finish **complex** task - **Zijian**
5. Profile page - **Eric**

Demo!



LINK

Appendix

Additional product/UI changes

- In addition to revising our product/UI designs based on heuristic feedback, we also adjusted our UI based on feedback from TA/section
- During team discussions, we also found new ideas to incorporate that would make our UI more effective
- Some examples will be shown in the following slides

Feedback from TA/section

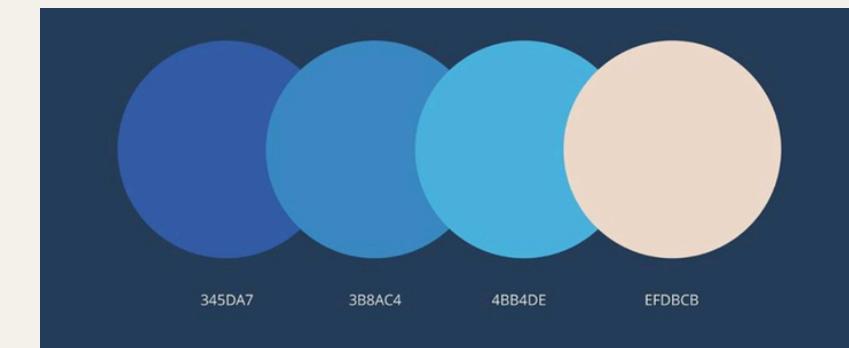
H8 - Colors do not match theme of edtech app that well

Rationale: Although the “blues” convey the seriousness of an education app, they might be too heavy for a teaching app whose values are “freedom” and “ease”

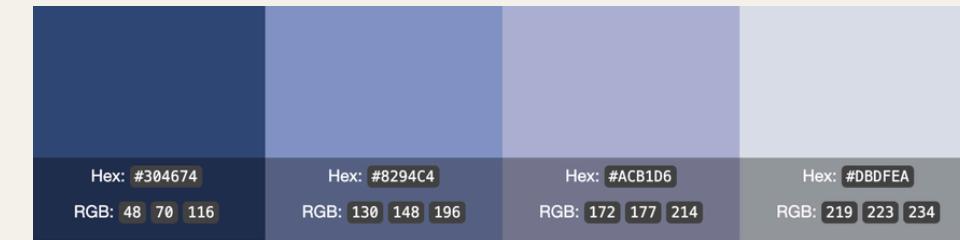
Fix: Change the color palette to something more fitting and more aesthetically pleasing.

Progress towards usability goals: Improves overall user experience as it makes the app more enjoyable visually, but also improves the intuitiveness of the app’s interface. Also, the old colors may have given more “ocean”, though we wanted to convey more “space” (uni-verse).

Before



After



Figma Prototype Link

Note: go to "prototype - updated" page

LINK

Website

LINK

Other changes

- Change 2nd tab name from “Teach Class” to “My Classes”
 - The former is too narrow - it might limit what the user thinks about the functionality of the tab & subsequent pages
 - Within “My Classes,” there are features to modify (add/delete) classes, view students within each class, and view lessons within each class & more

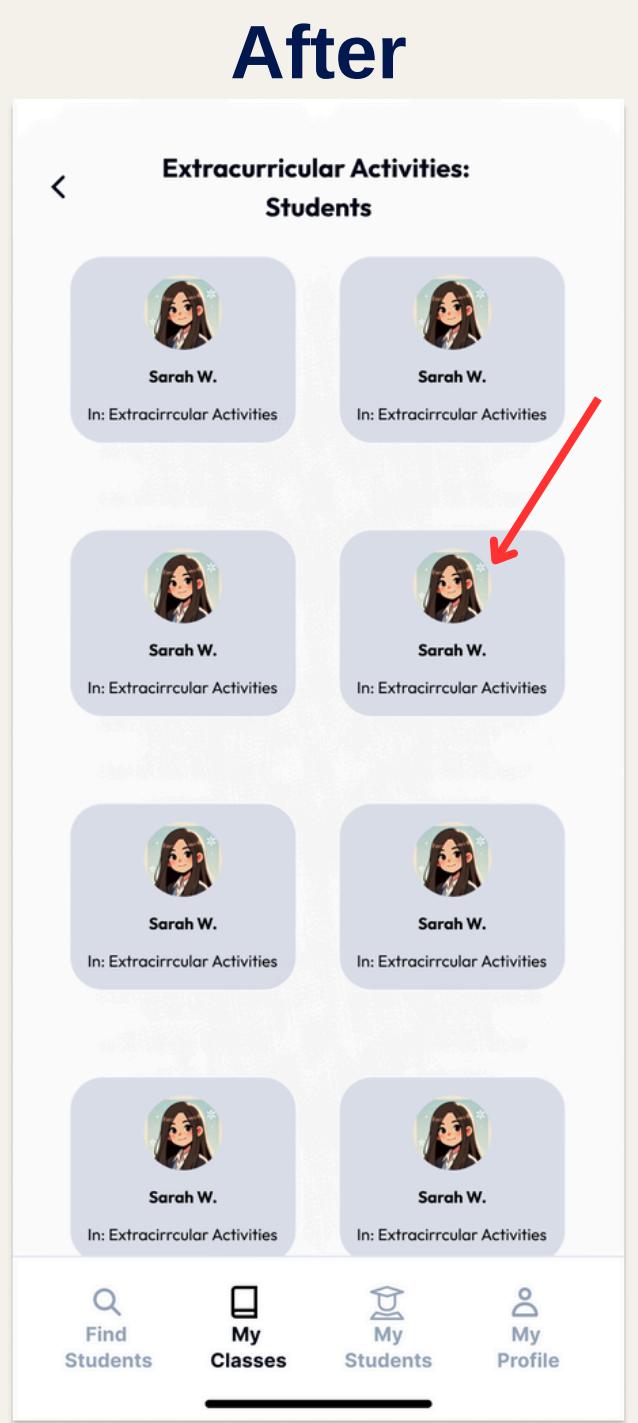
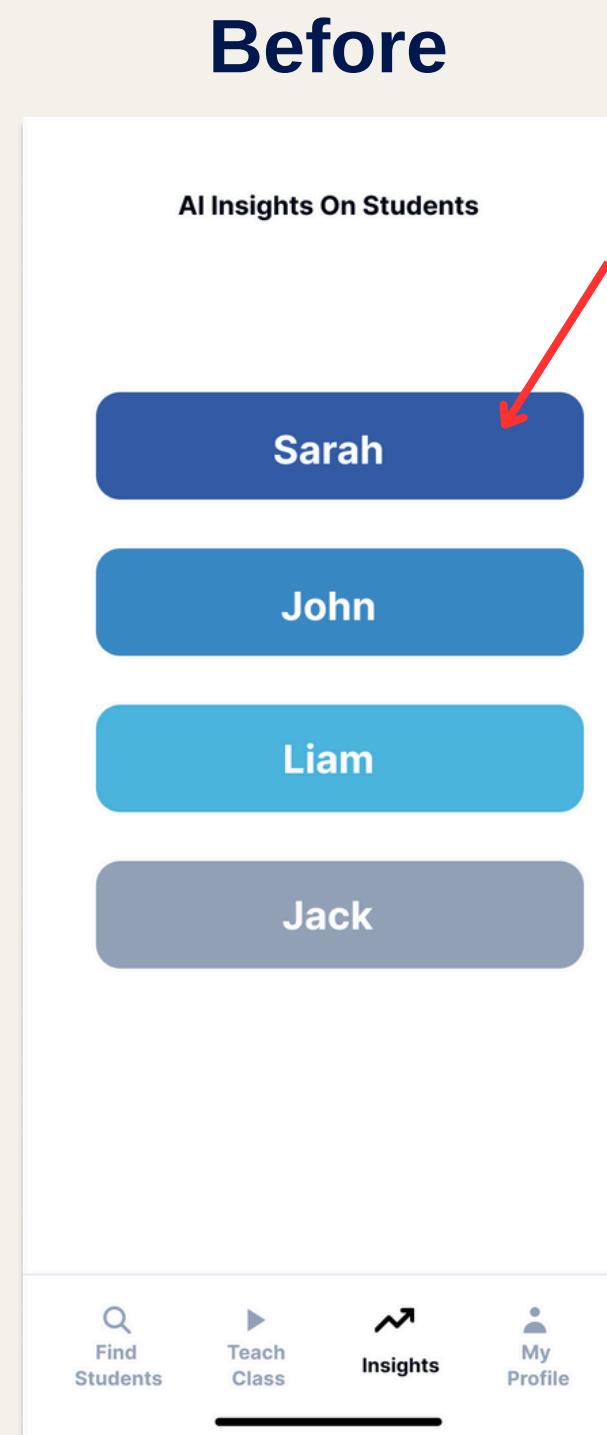
Severity 3

H5- Students are only listed by their first name with no other identifier

Rationale: Under the insights tab, students are listed by their first name with no other identifier, such as the first letter of a last name or a profile picture. This might cause errors when multiple students share the same first name.

Fix: Add a profile picture next to the name and the first letter of their last name.

Progress towards usability goals: Improves efficiency as counselors can quickly identify their students' identify without having to search more information when just being given their first name.



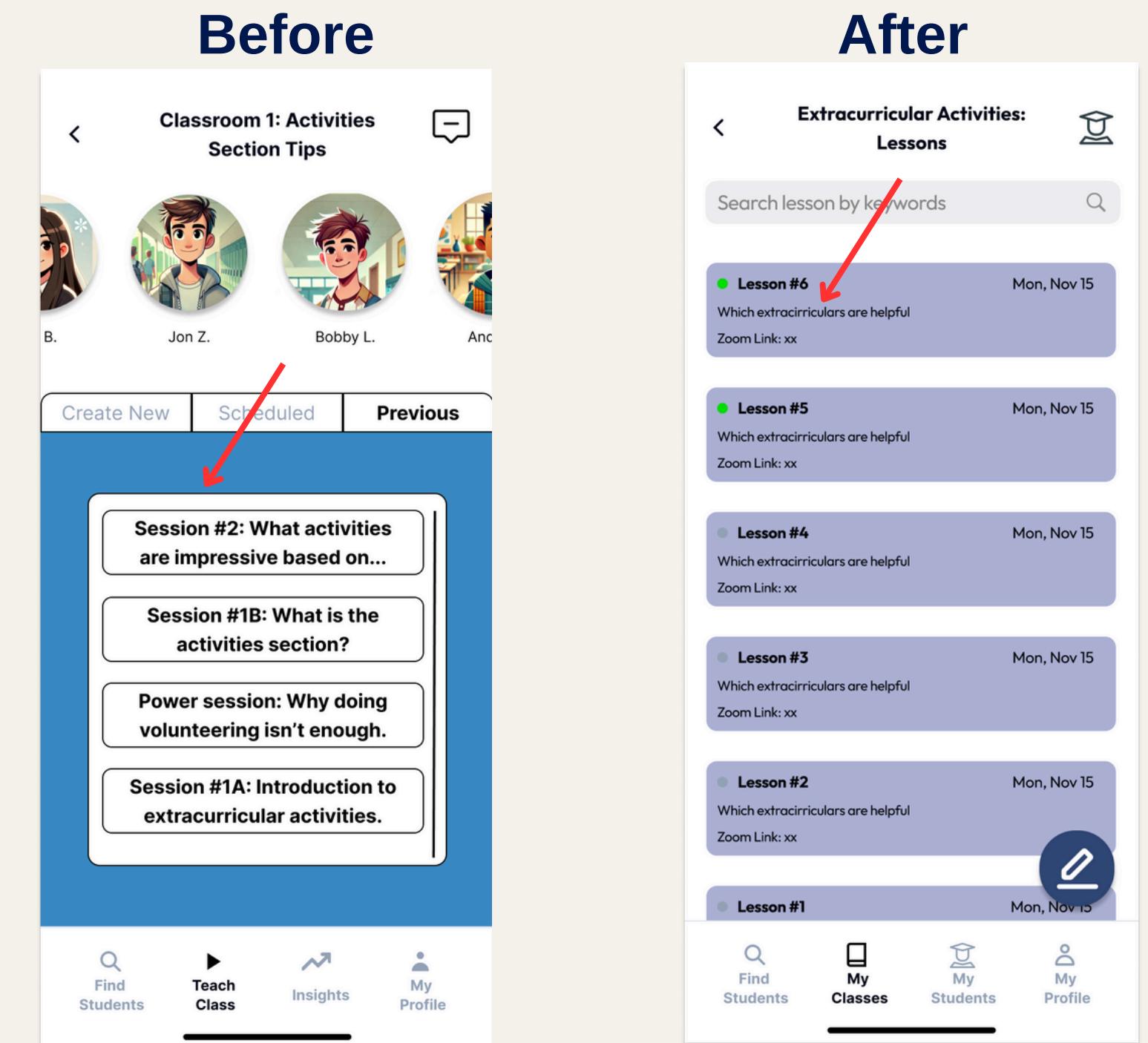
Severity 3

H4 - Naming/categorization of “sessions” is confusing

Rationale: There seems to be inconsistencies with how sessions are named. The evaluators weren't sure why some sessions were numbered e.g. “Session #2”, and why some had a specific name e.g. “Power session”

Fix: Remove session identifiers and use a simple format like “Lesson 1”, “Lesson 2,” etc.

Progress towards usability goals: Improves intuitiveness as the contrast in colors (e.g. the navy of the first section) guides the user first read the insight section, then look at the explanation section, which is the logical flow.



Severity 3

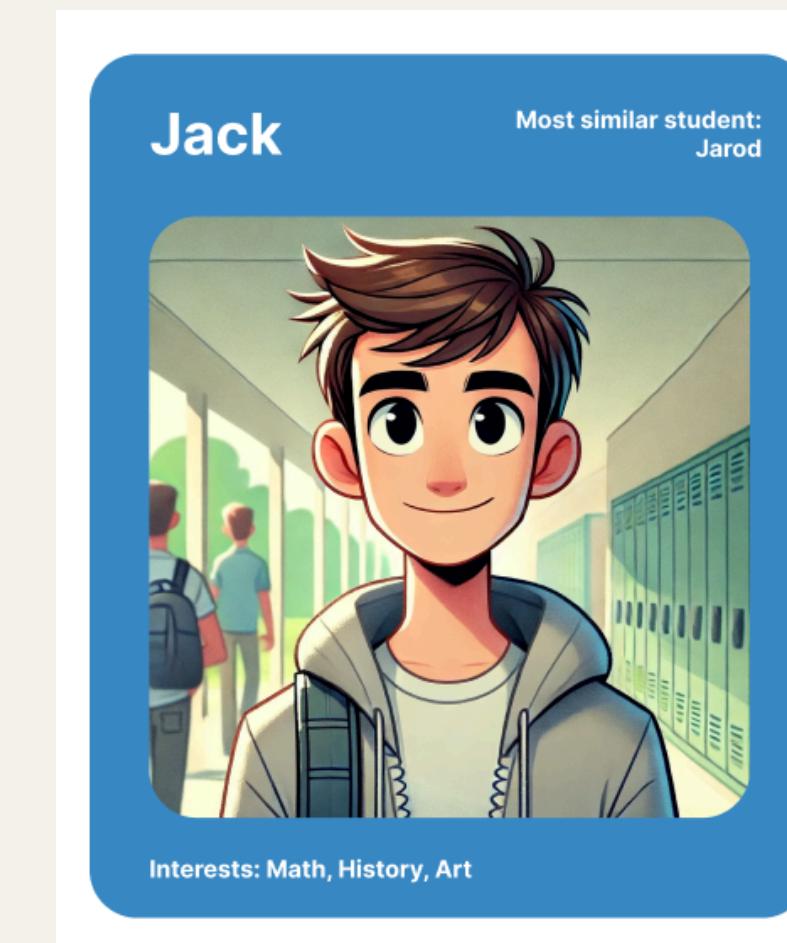
H8/12- Profile photo too big on the “find students” tab/information section to small

Rationale: The most important part of the counselor's selection process is not the image, but rather, the information, especially given the app's niche focus on allowing counselors to pick based on background and interest fit.

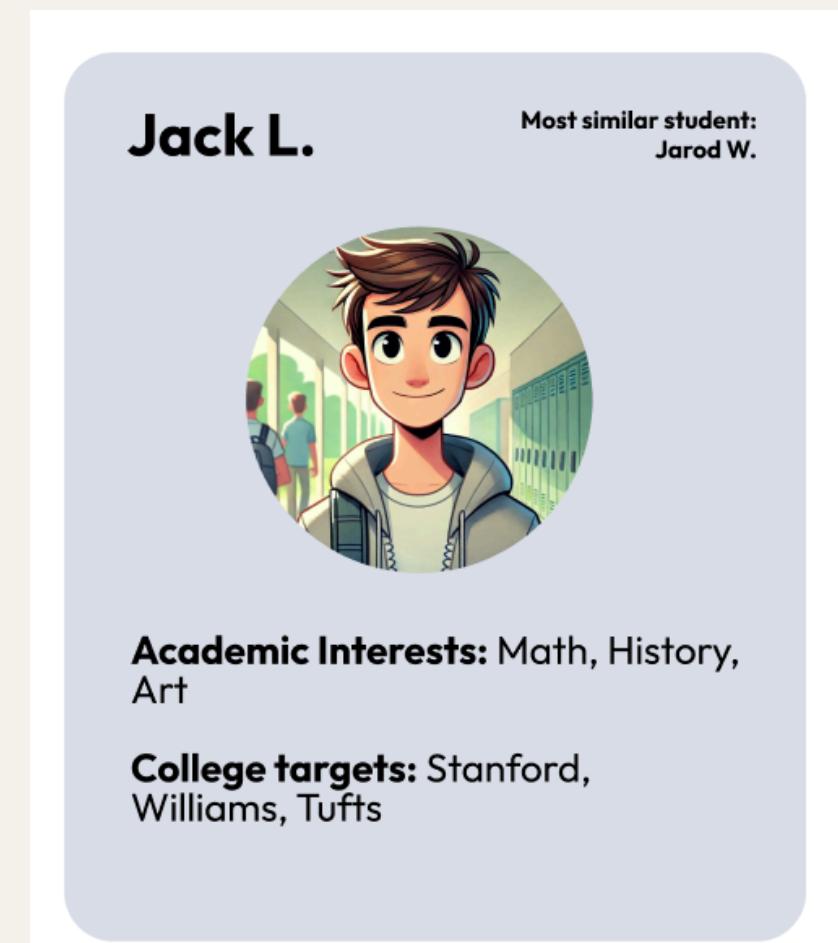
Fix: Reduce the size of the image, and put more emphasize on the student's background.

Progress towards usability goals: Conveys the app's value proposition more strongly. Improves efficiency as it might make the process of choosing students with similar interests more smoothly for the counselor.

Before



After



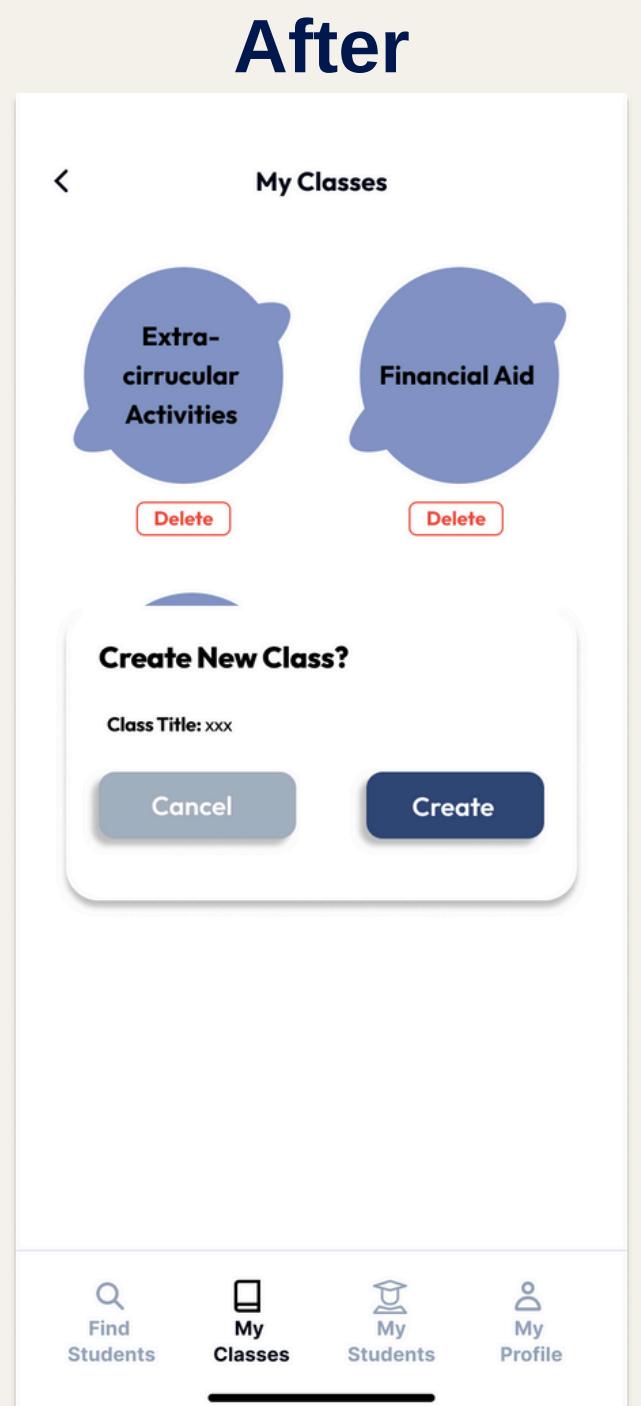
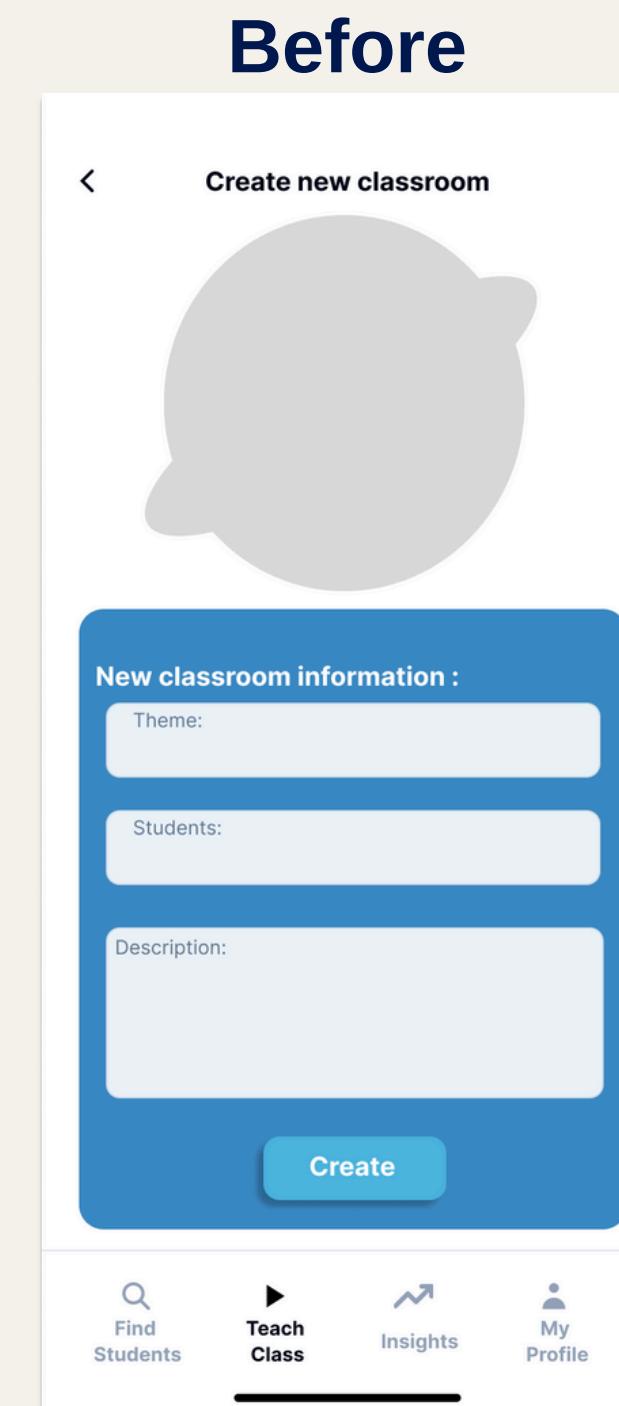
Severity 3

H8 - Unnecessary description field when creating a new class

Rationale: The description of the class is redundant as the name already reveals the theme/nature of the class and no where else in the app relates back to this.

Fix: Remove the field to enter a description when creating a new class.

Progress towards usability goals: Improves efficiency as it is not a necessary input field, so removing it allows the counselor to create a new class more quickly.



Violations we did not address & why

- 1. H2 - Displaying images of students on the “Find” tab could lead to potential biases or discrimination from the counselor**
 - a. In theory, when a student creates a profile, they have the choice to use avatar images instead of their real photos
 - b. But since our app focuses on the counselor’s POV (alternative login as student exists in theory, but not for the purpose of this class)
 - c. All our existing student profiles
- 2. Violations regarding the video-chatting interface (medium task)**
 - a. We have decided to remove the in-app video-chatting functionality
 - b. This was both because of considerations for the actual implementation, which would be tricky, but also we thought that Zoom is already an industry-standard that students and counselors might be more familiar/comfortable with using already, so actually using an external provider like Zoom could contribute to our “efficiency” usability goal