

TA²I

TIMELY, ACCURATE, INSIGHTFUL

22 Nov, 2024

THE TEAM



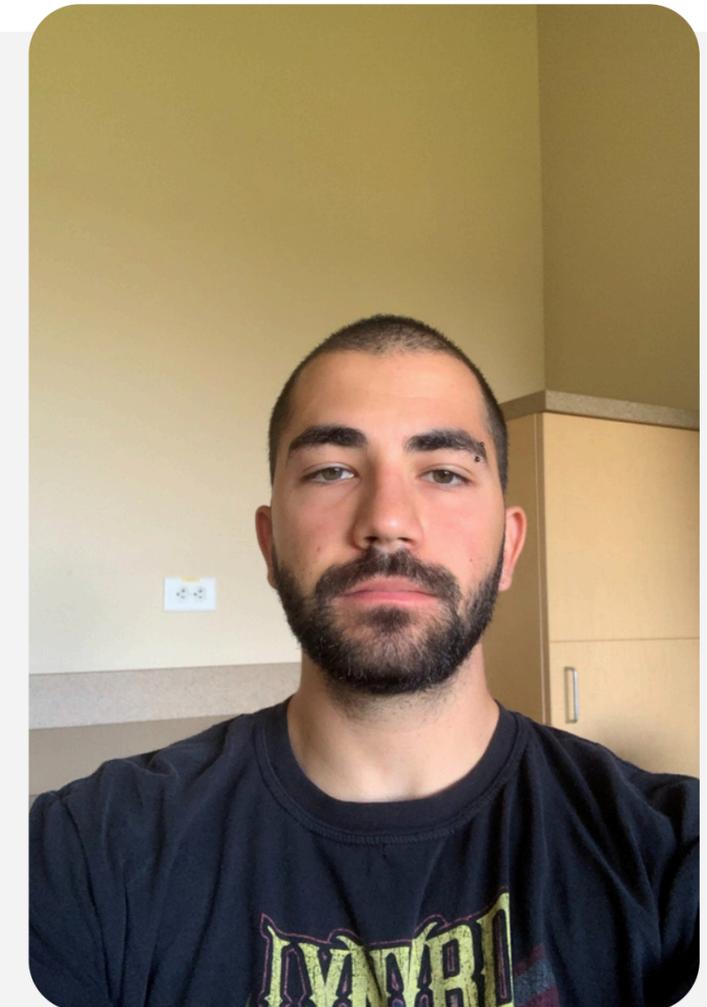
Violet Crow
Junior '26, Symbolic
Systems



Shi Han
Masters'25 Learning
Design & Tech



Abhi Desai
Senior'25 CS



Polycarpus Yiorkadjis
Masters'25 CS

OVERVIEW



VALUE PROPOSITION

Overview/Problem



- Teachers struggle with providing customised and consistent feedback to students.

Value Proposition

- Automating feedback with timely insights
- Consistency and fairness in evaluation

Solution Overview

- Helps teachers generate grading, feedback for students according to their input.

PRESENTATION OUTLINE

- 1) HEURISTIC EVALUATION RESULTS**
- 2) UI & PRODUCT REVISION**
- 3) PRODUCT IMPLEMENTATION STATUS**
- 4) DEMO**

HEURISTIC EVALUATION RESULTS

| Heuristic | # Viol. (sev 0) | # Viol. (sev 1) | # Viol. (sev 2) | # Viol. (sev 3) | # Viol. (sev 4) | # Viol. (total) | |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|
| H1: Visibility of System Status | 0 | 2 | 0 | 1 | 0 | 3 | |
| H2: Match b/w System & World | 1 | 1 | 1 | 0 | 0 | 3 | |
| H3: User Control & Freedom | 2 | 1 | 1 | 2 | 3 | 9 | |
| H4: Consistency & Standards | 0 | 7 | 2 | 0 | 0 | 9 | |
| H5: Error Prevention | 0 | 0 | 2 | 2 | 3 | 7 | |
| H6: Recognition not Recall | 0 | 3 | 3 | 0 | 2 | 8 | |
| H7: Flexibility & Efficiency of Use | 0 | 2 | 1 | 3 | 0 | 6 | |
| H8: Aesthetic & Minimalist Design | 2 | 7 | 1 | 1 | 0 | 11 | Most Common |
| H9: Help Users with Errors | 0 | 0 | 1 | 2 | 1 | 4 | |
| H10: Help & Documentation | 0 | 0 | 1 | 4 | 1 | 6 | |
| H11: Accessible Design | 0 | 3 | 3 | 1 | 0 | 7 | |
| H12. Value Alignment & Inclusion | 0 | 5 | 1 | 0 | 1 | 7 | |
| Total Violations | 5 | 31 | 17 | 16 | 11 | 80 | |
| % | 6.25% | 38.80% | 21% | 20% | 13.80% | | |
| Ranking in terms of occurrence | 5 | 1 | 2 | 3 | 4 | | |

MAJOR UI REVISIONS

**All UI revisions done within med-fi first
(shown here)**

All Severity 3 and 4 violations addressed

63/80 violations fixed in total

**Primary focus on readability &
documentation**

Before



Tutorial Page

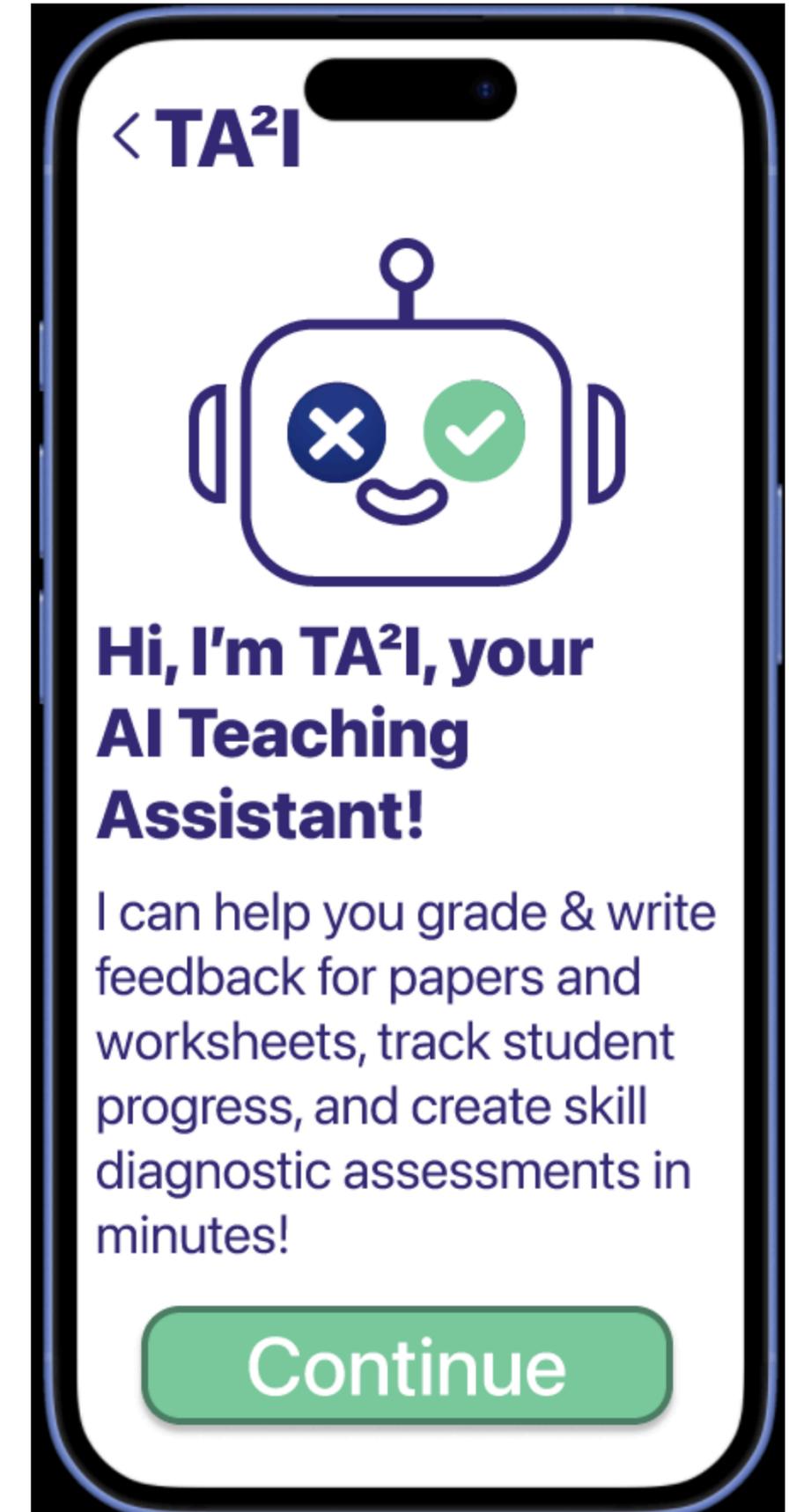
Changes

- Improved spacing
- Added back buttons throughout

Justifications

- Improved spacing enhances readability and ensures a clean, accessible interface.
- Adding back buttons provides intuitive navigation, giving users control

After



Before



Homepage (Classes)

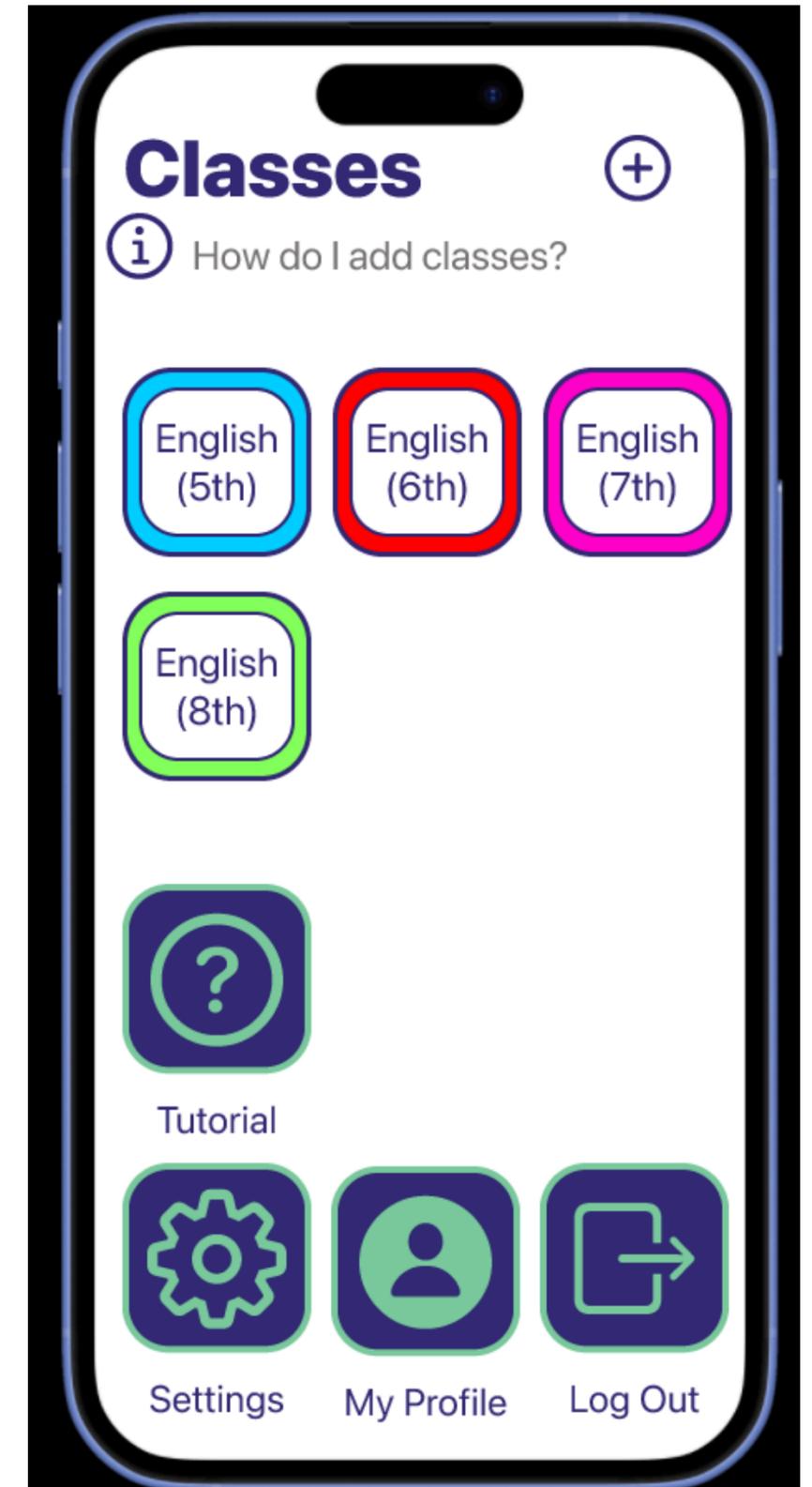
Changes

- Redesigned to mimic feel of other pages (& phone home screens)
- Added buttons for Tutorial, Settings, Profile, & Log Out
- Removed gradients for readability
- Added tooltip for info box

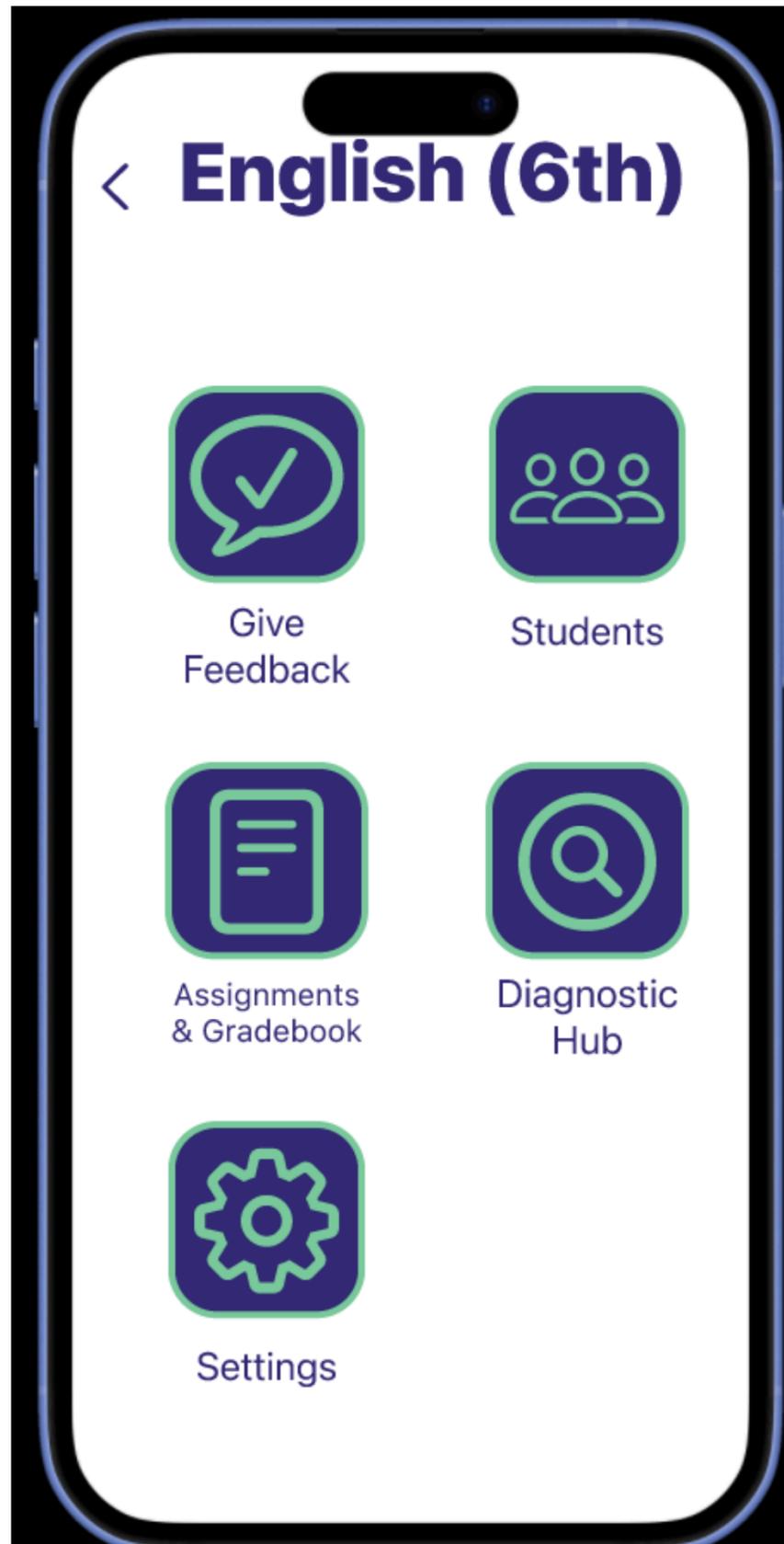
Justifications

- The redesign mimics familiar interfaces for a seamless experience.
- Adding buttons for key actions enhances navigation, while removing gradients improves readability
- Tooltips provide clear context for information boxes.

After



Before



Class Page

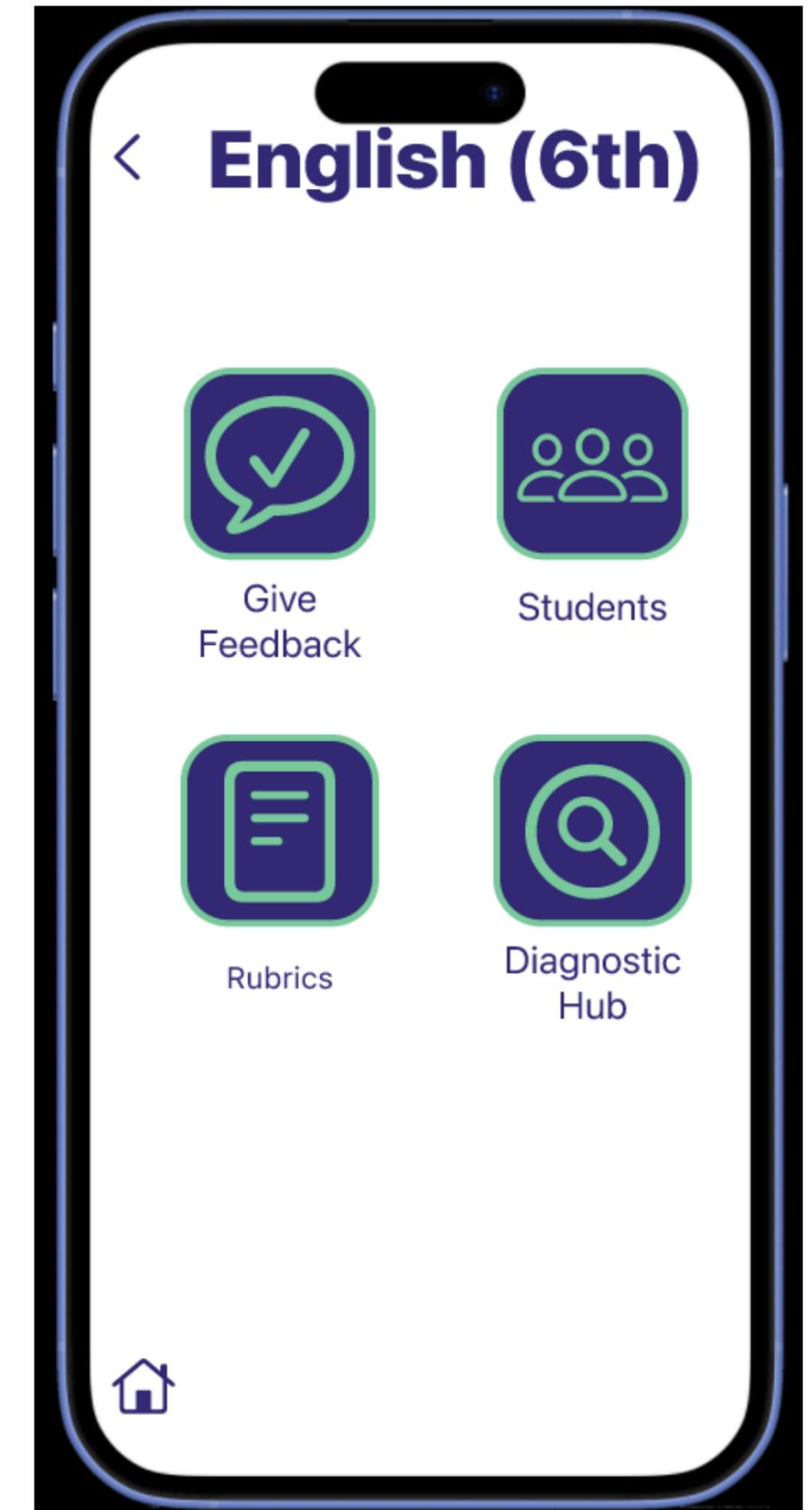
Changes

- Changed Assignments --> Rubrics
- Moved Settings to home page
- Added home button (present throughout)

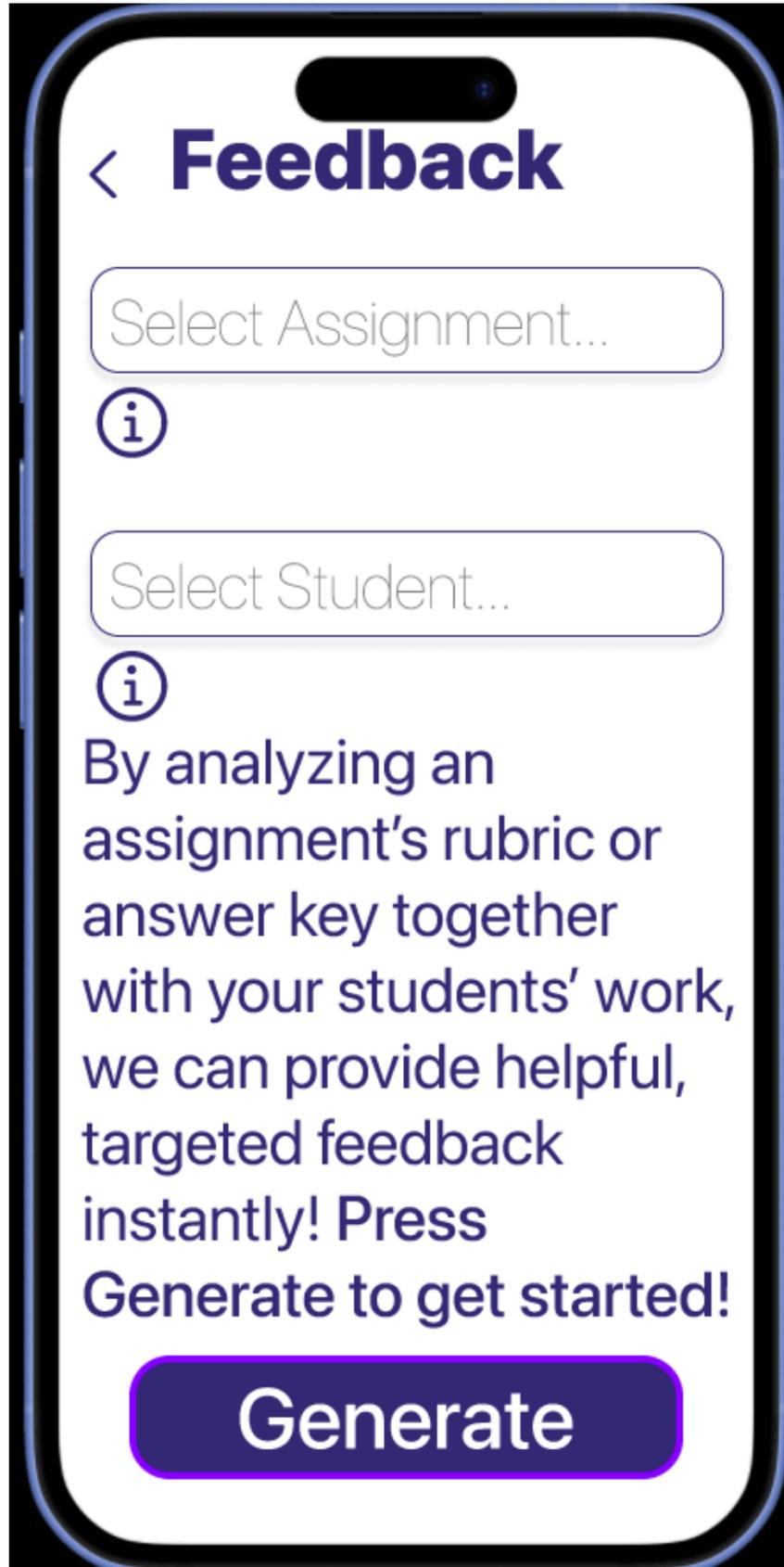
Justifications

- Renaming "Assignments" to "Rubrics" clarifies the content's purpose.
- Moving Settings to the home page improves accessibility.
- Adding a persistent home button ensures easy navigation and consistency across the app.

After



Before



Feedback

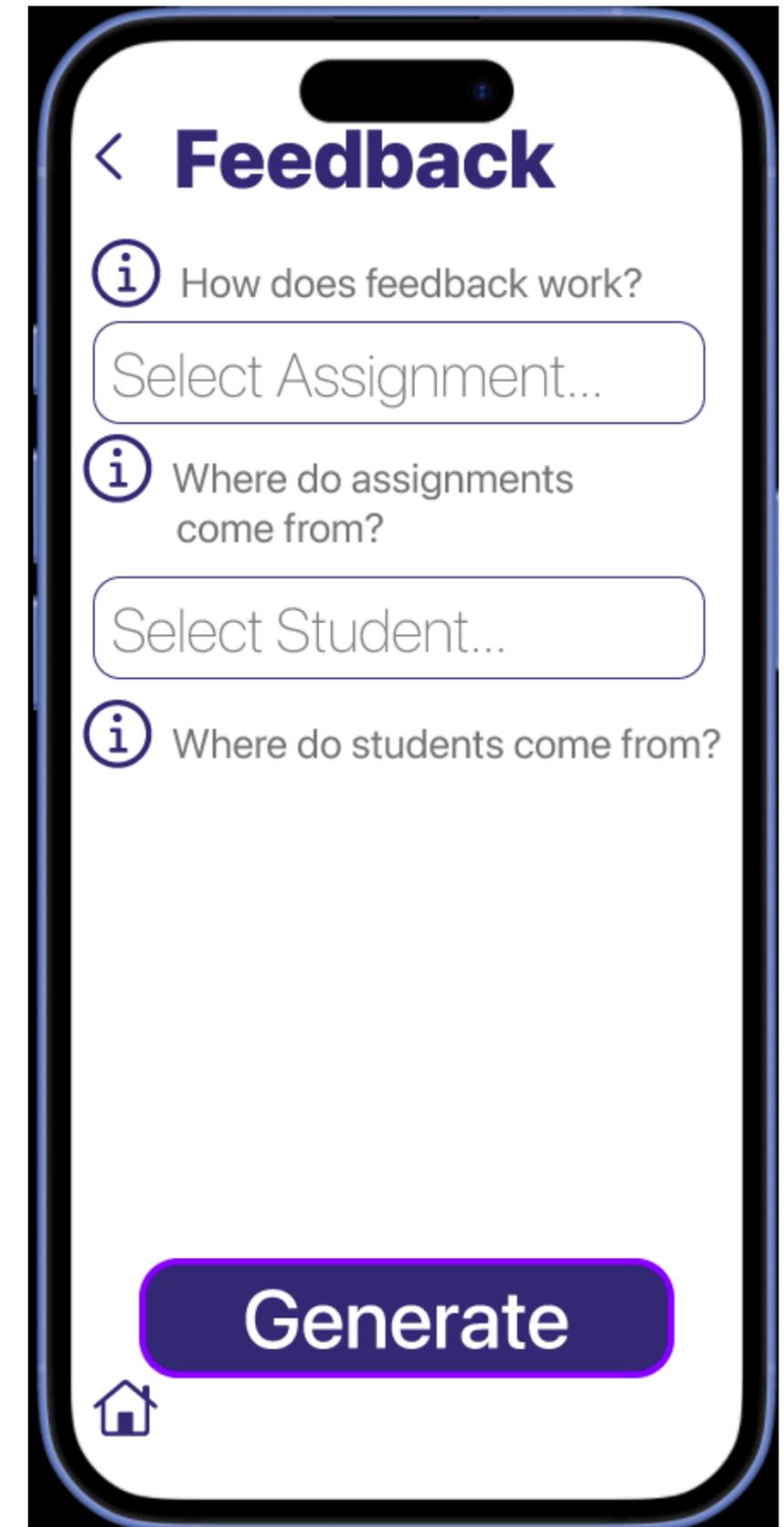
Changes

- Added info button tooltips
- Increased weight (for visibility) of selection text
- Moved large text into a new info box

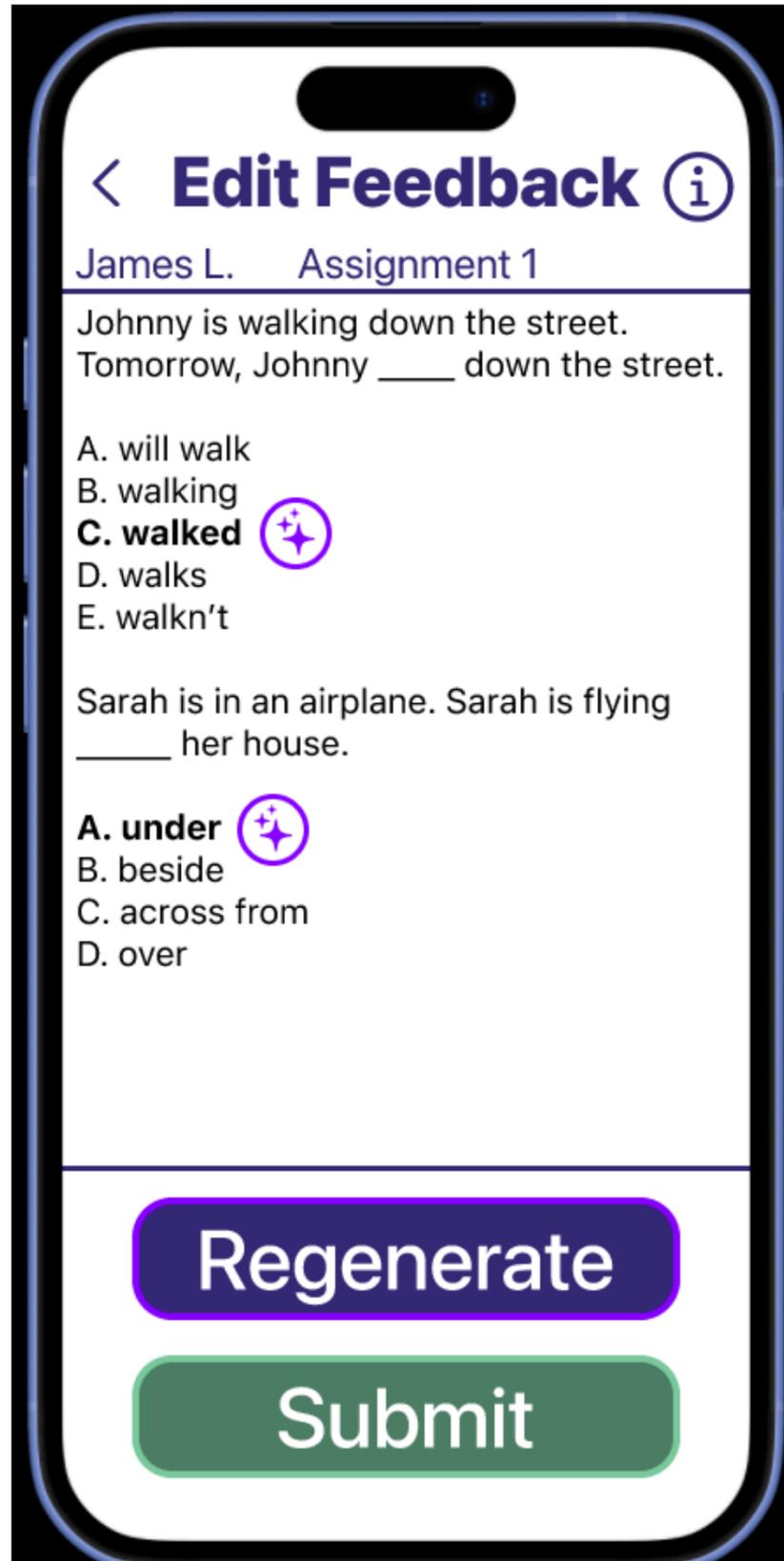
Justifications

- Info button tooltips provide helpful context, enhancing user understanding.
- Increasing the weight of selection text improves visibility and readability.
- Moving large text into a dedicated info box keeps the layout clean and organized.

After



Before



Edit Feedback

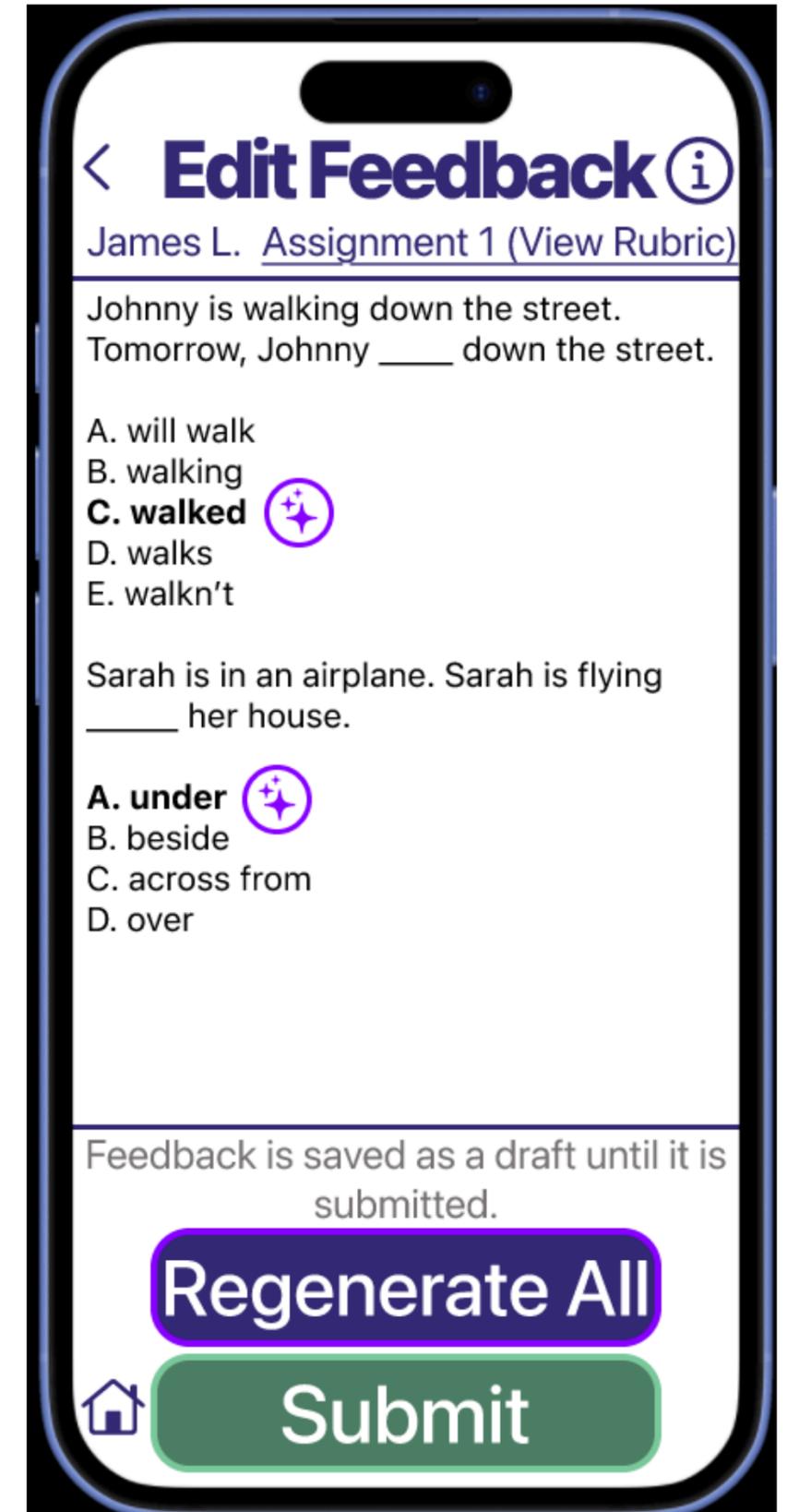
Changes

- Added ability to view rubric directly from this page
- Changed wording on 'Regenerate' button
- Added explanatory text for saving edits

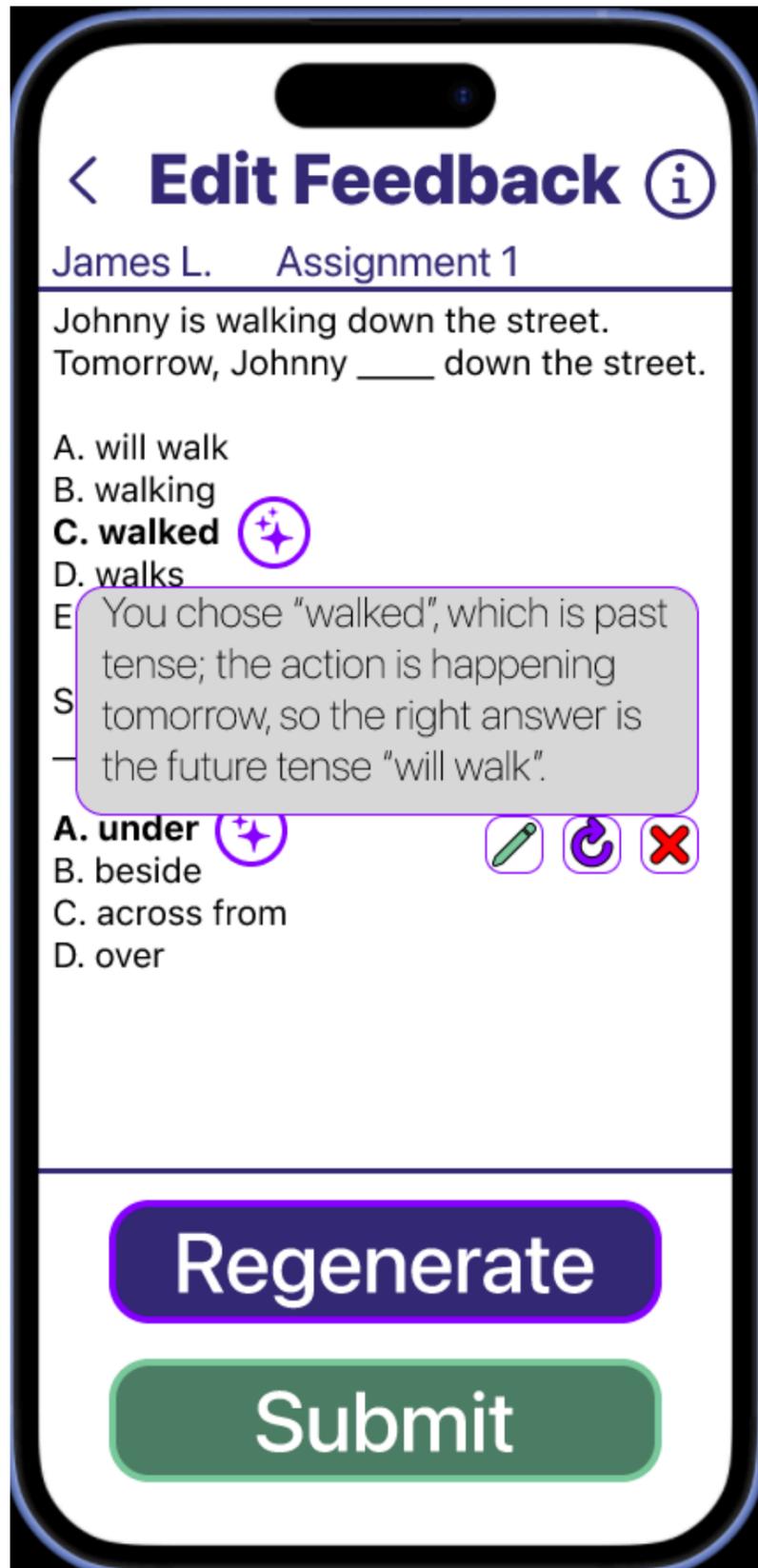
Justifications

- Allowing direct access to the rubric improves user efficiency and workflow.
- Changing the wording on the 'Regenerate' button clarifies its action.
- Adding explanatory text for saving edits reduces confusion and ensures users understand the process.

After



Before



Edit Feedback (Editing)

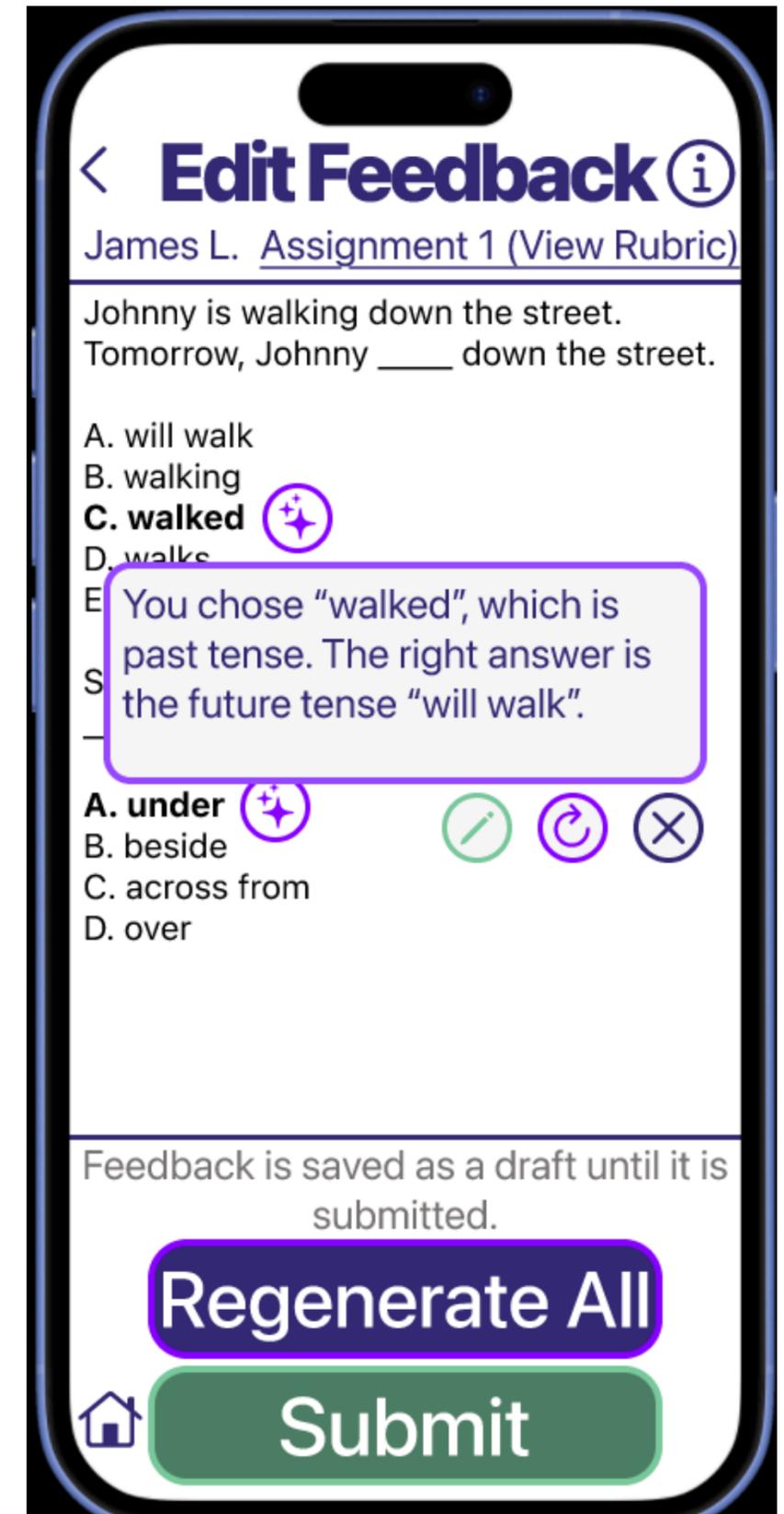
Changes

- Greatly increased contrast and readability for info text
- Altered design and color scheme for action buttons, increasing consistency with other UI elements and readability

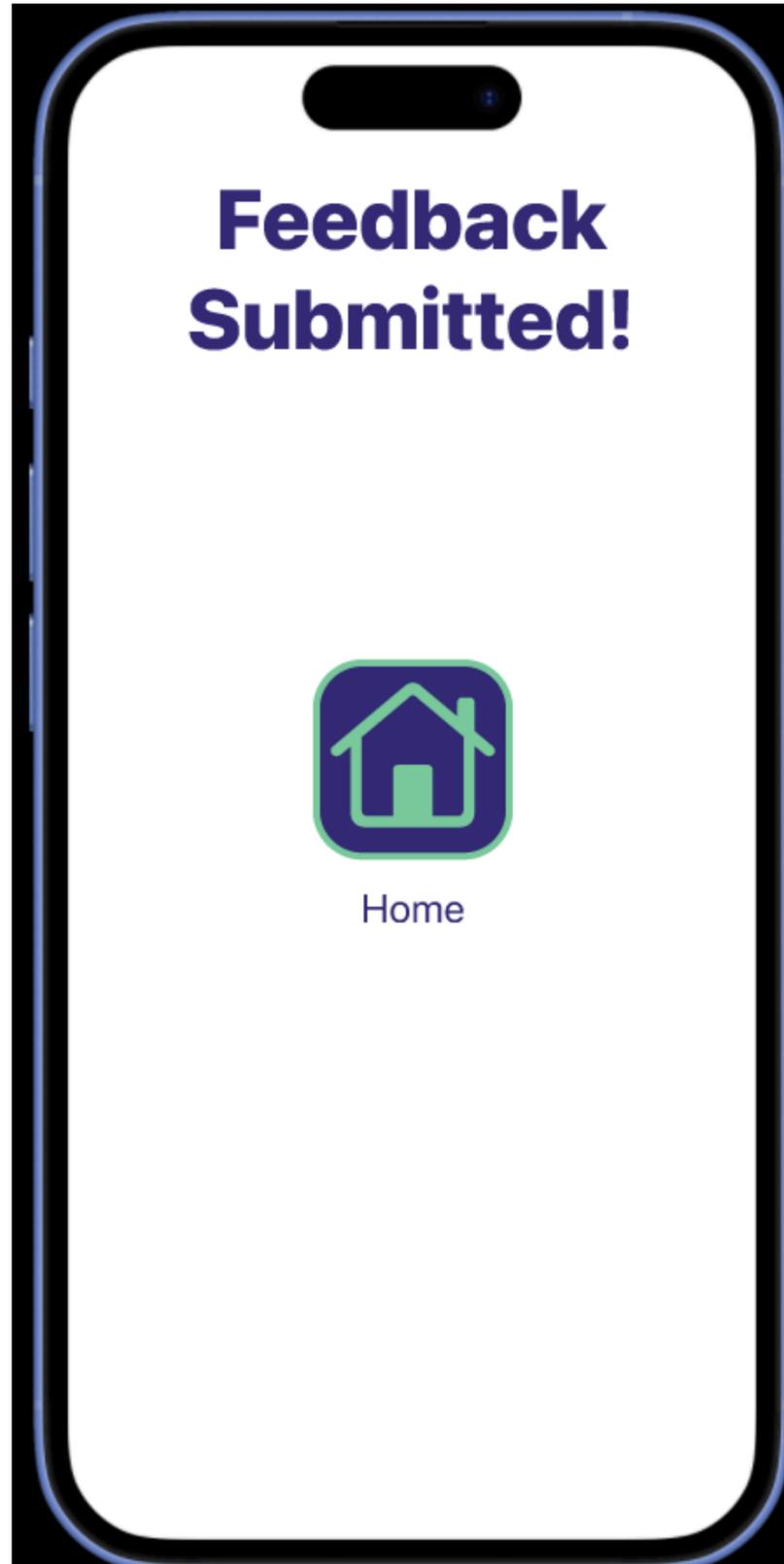
Justifications

- Increasing contrast for info text improves legibility, making important details easier to read.
- Altering the design and color scheme of action buttons ensures visual consistency across the UI.

After



Before



Feedback Submission

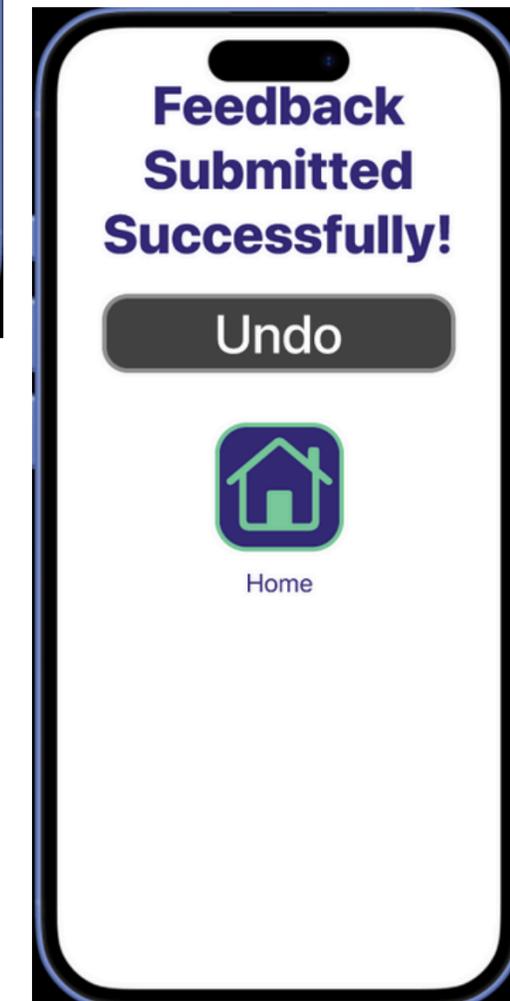
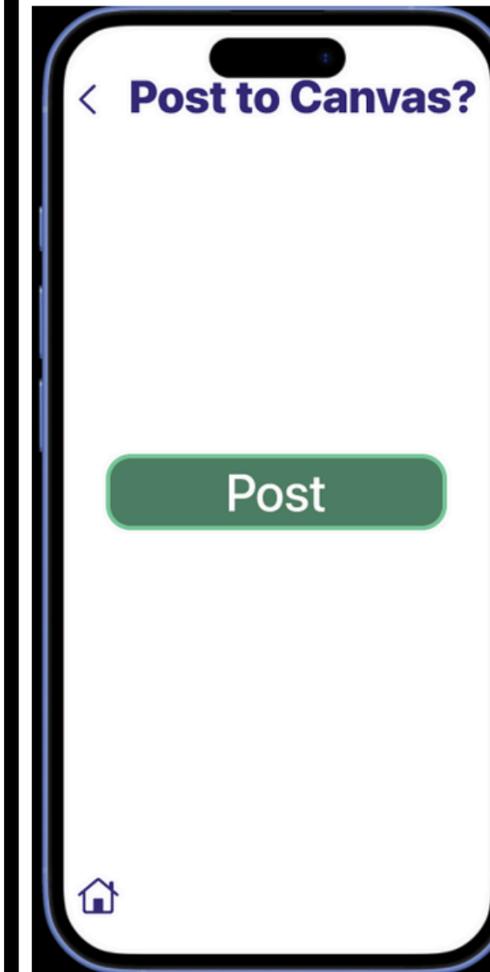
Changes

- Added stopgap/confirmation screen to submission flow
- Added option to immediately undo
- Added "successfully" to indicate success

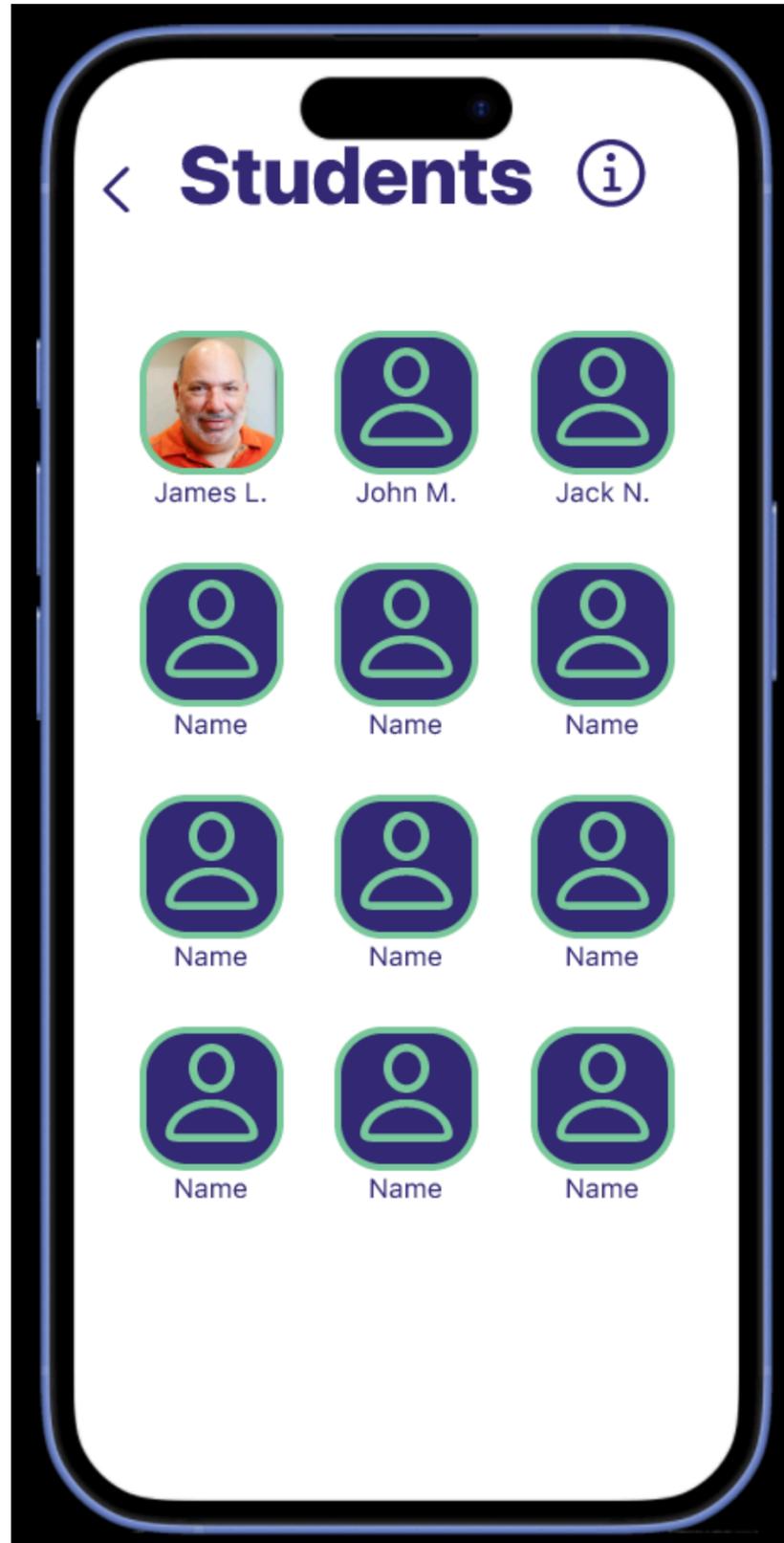
Justifications

- The stopgap/confirmation screen in the submission flow prevents accidental submissions.
- The "undo" option offers immediate error correction
- Adding "successfully" confirms actions, providing clear feedback and reducing user uncertainty.

After



Before



Students

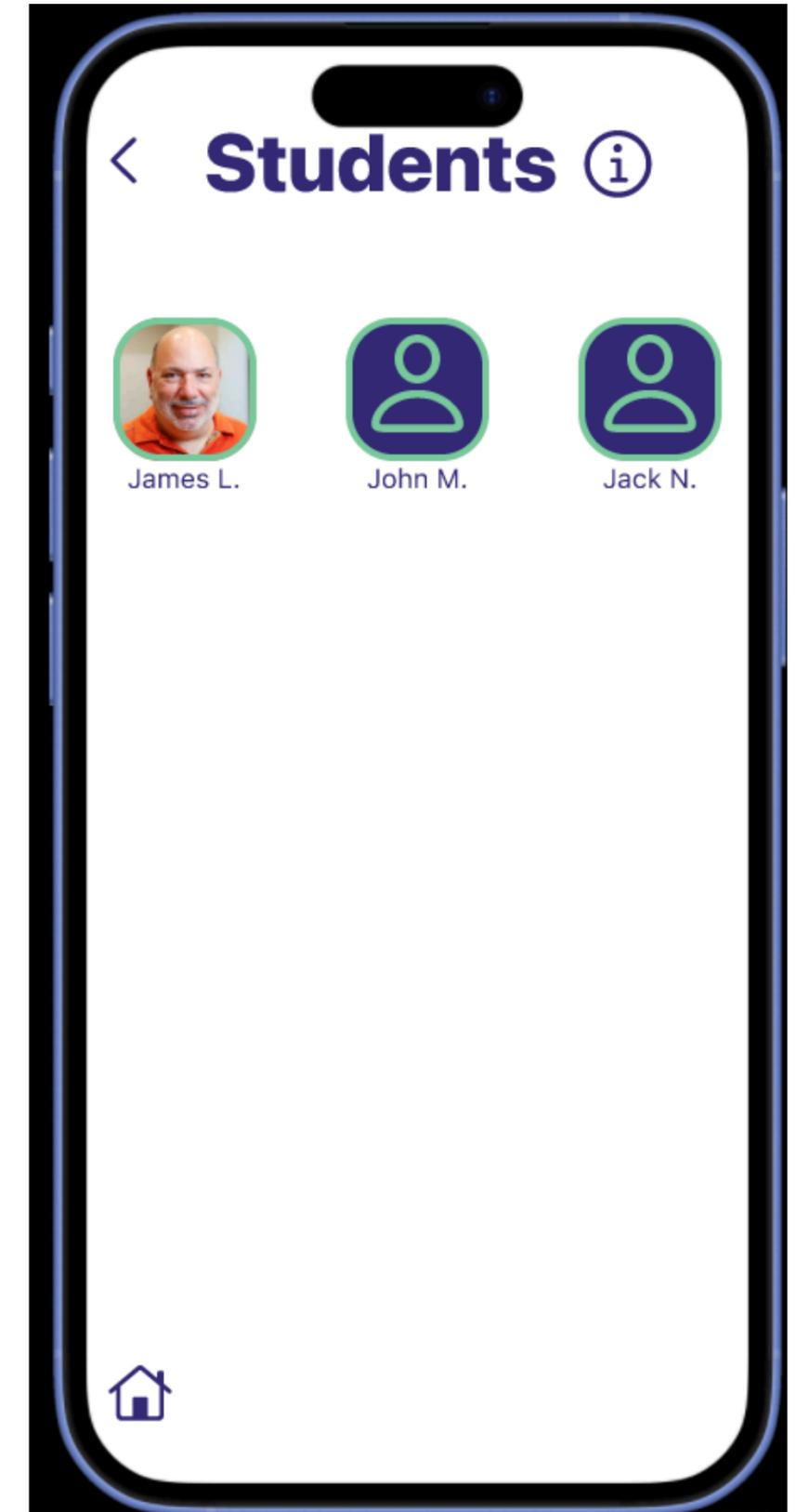
Changes

- Removed placeholder students
- Increased spacing between students for accessibility

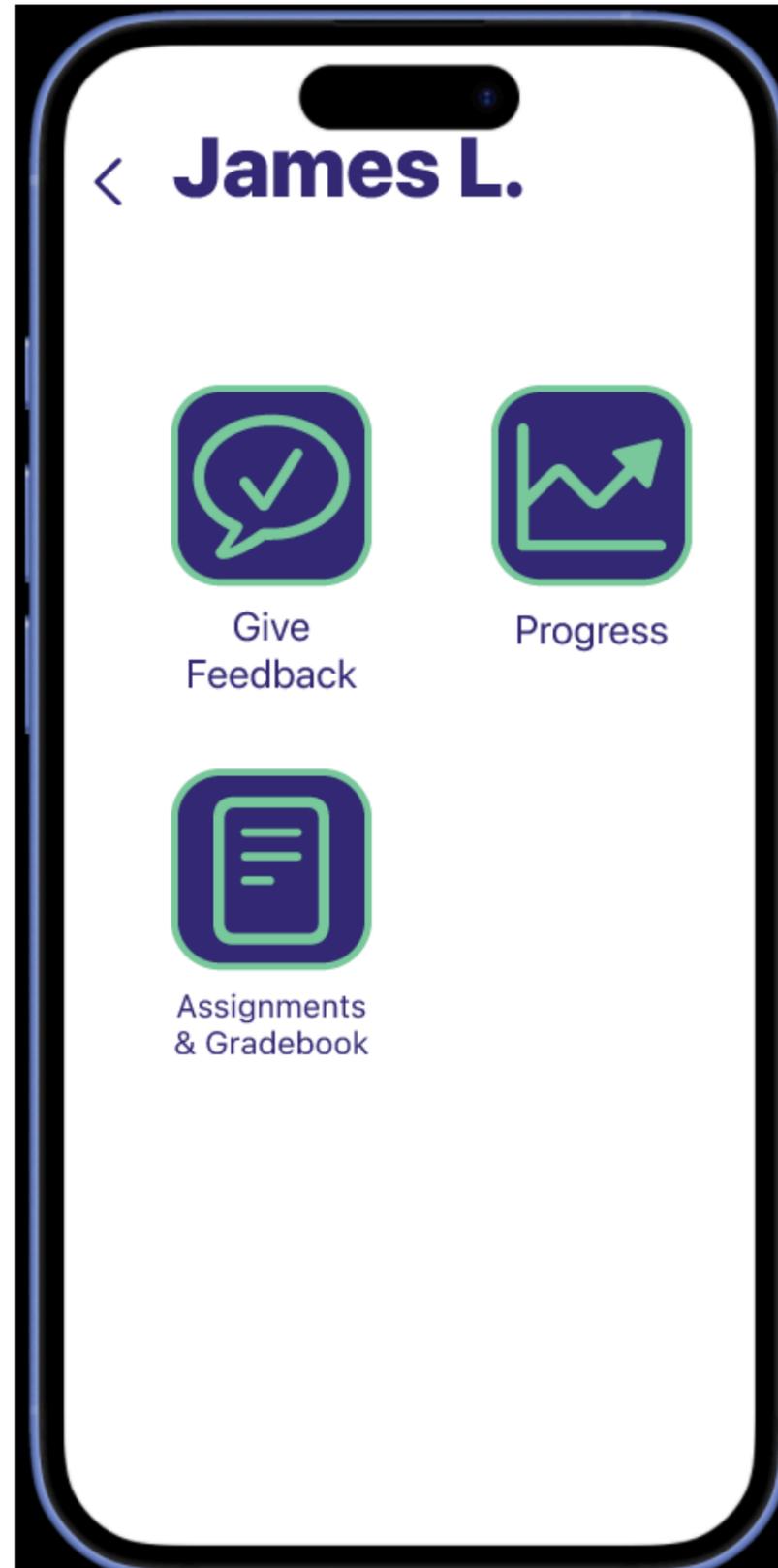
Justifications

- Removing placeholder students streamlines the interface and reduces confusion.
- Increasing spacing between students improves accessibility, making the list easier to navigate and reducing the risk of accidental selection.

After



Before



Student Page

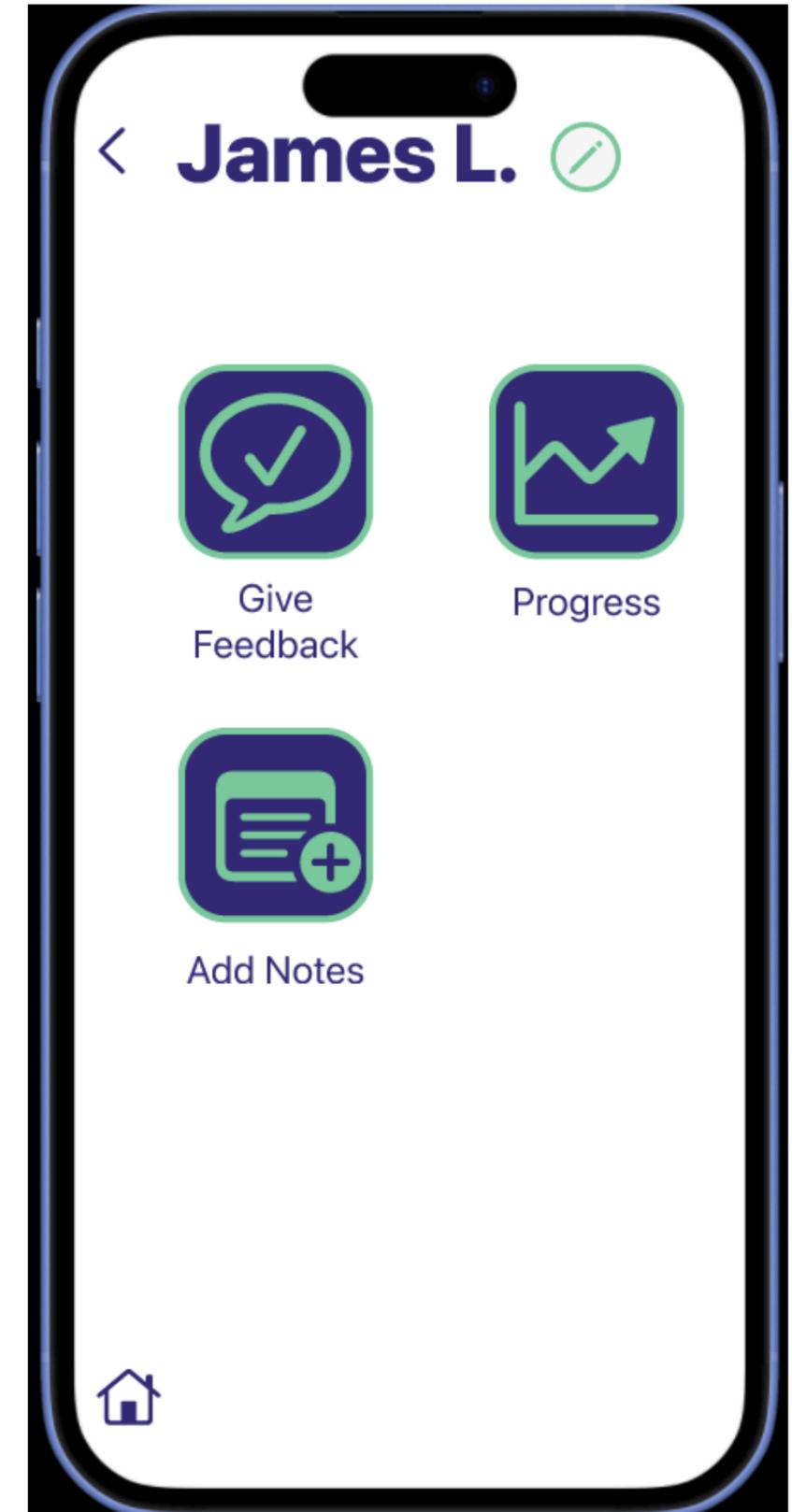
Changes

- Removed unnecessary action (assignments isn't student-specific)
- Added option for teacher to add notes
- Added option for teacher to edit name of student (for nicknames, preferred names, etc)

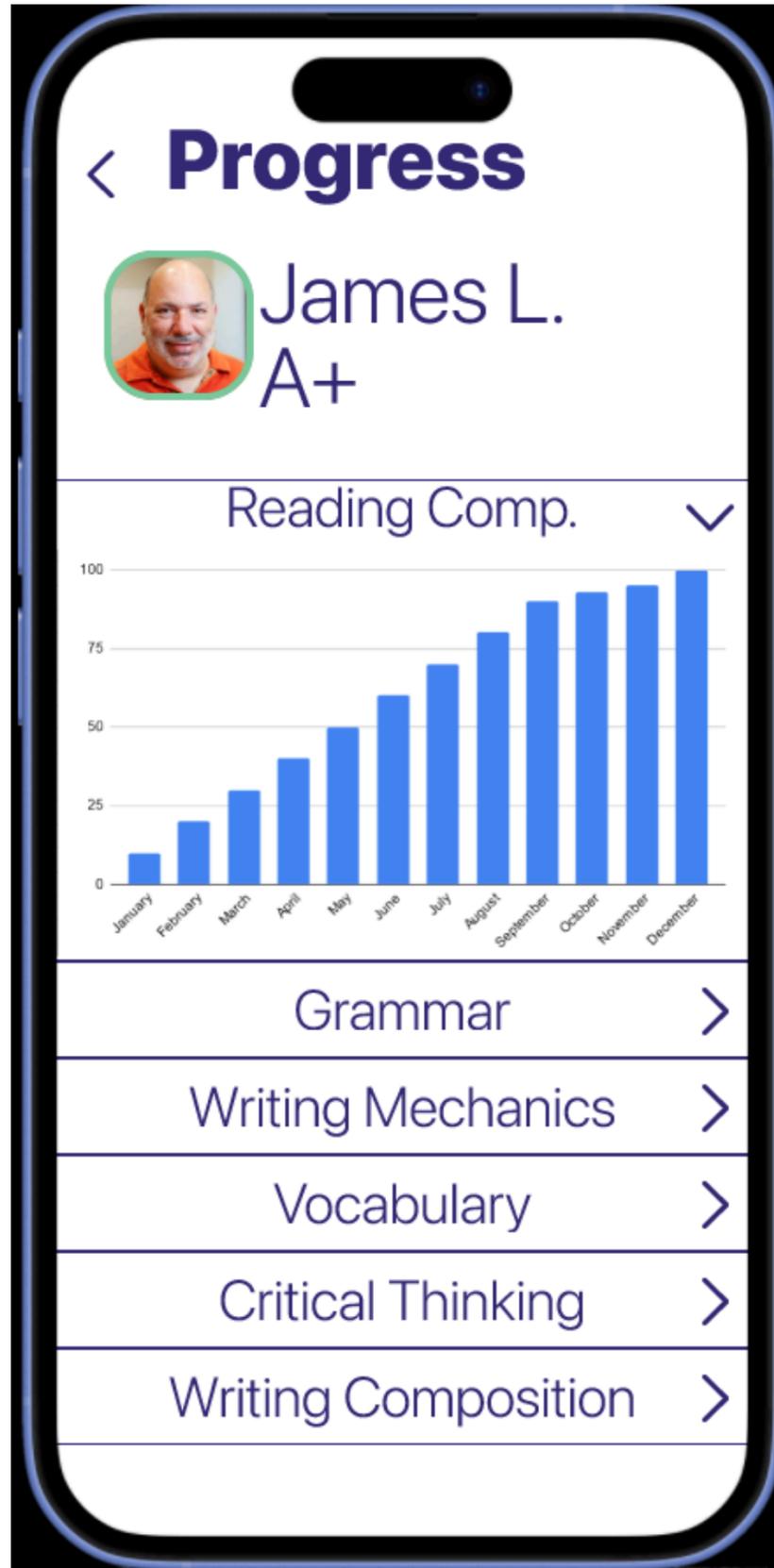
Justifications

- Removing the unnecessary action streamlines the interface, focusing on relevant tasks.
- Adding options for teachers to add notes and edit student names (for nicknames or preferred names) enhances personalization and flexibility.

After



Before



Progress

Changes

- Removed grade
- Added info box to explain functionality and data sourcing
- Added overall tab, which is now expanded by default
- Removed tap arrows for expansion, made boxes tap-able

Justifications

- Removing the grade simplifies the interface, focusing on key data.
- The info box clarifies functionality and data sourcing.
- The expanded default "overall" tab offers immediate access to key information.
- Making boxes tappable (instead of using arrows) enhances ease of navigation and streamlines the user experience.

After



Before



Diagnostic Hub

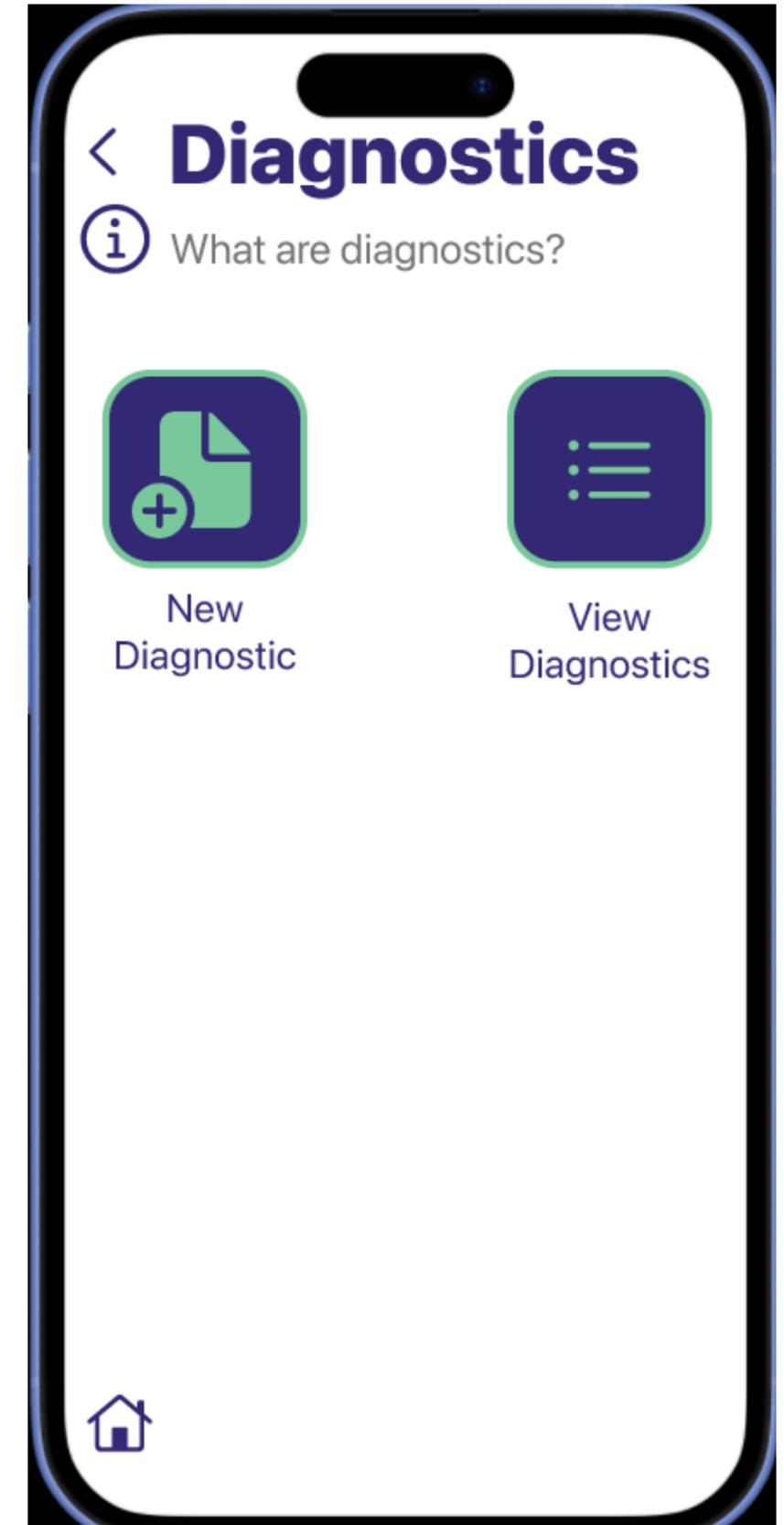
Changes

- Moved & added tooltip to info button
- Changed wording to 'Diagnostics' for simplicity

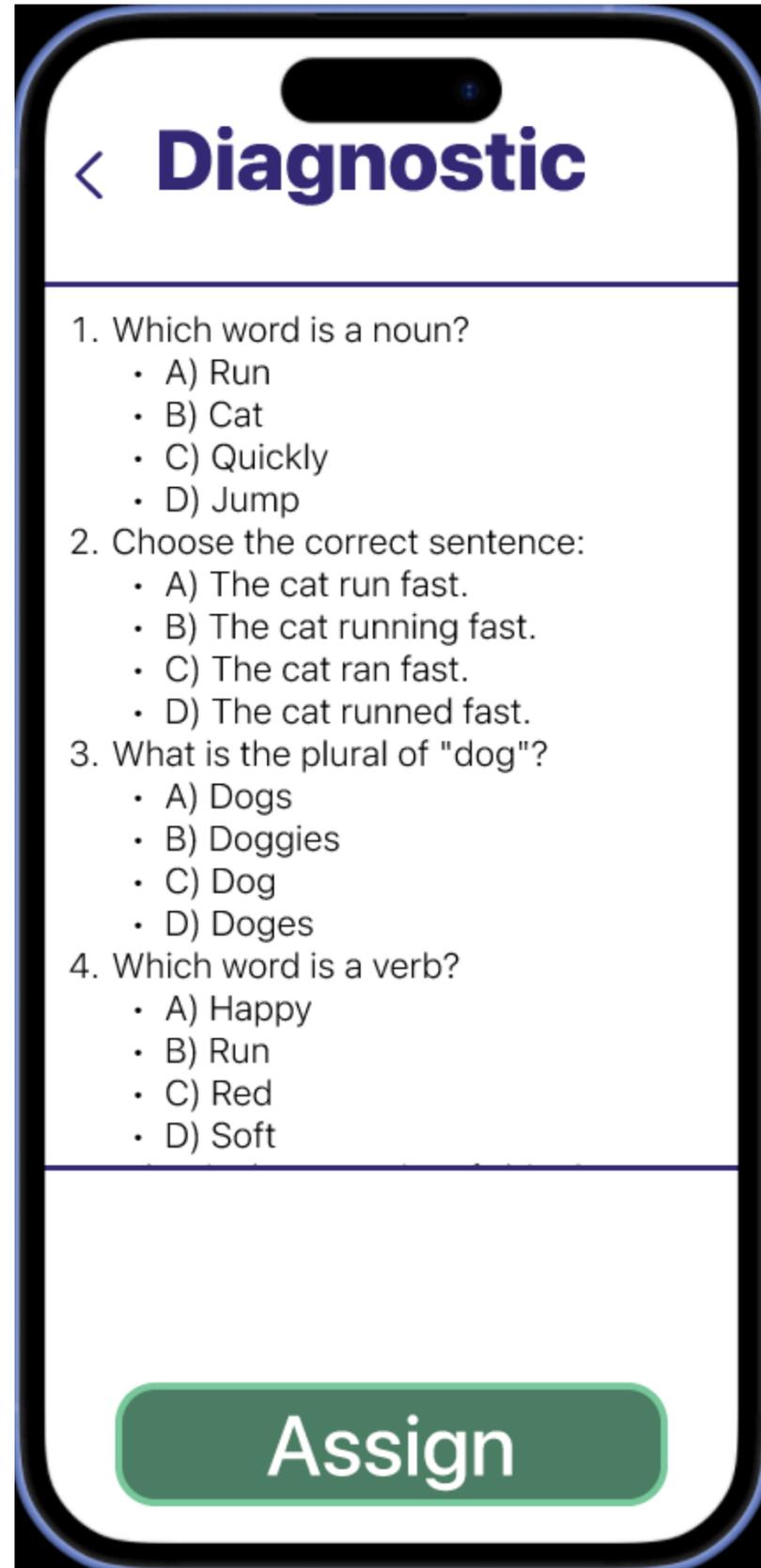
Justifications

- Moving and adding a tooltip to the info button improves accessibility and provides immediate context for users.
- Changing the wording to "Diagnostics" simplifies the label, making it clearer and more intuitive for users to understand its purpose.

After



Before



Generated Diagnostic

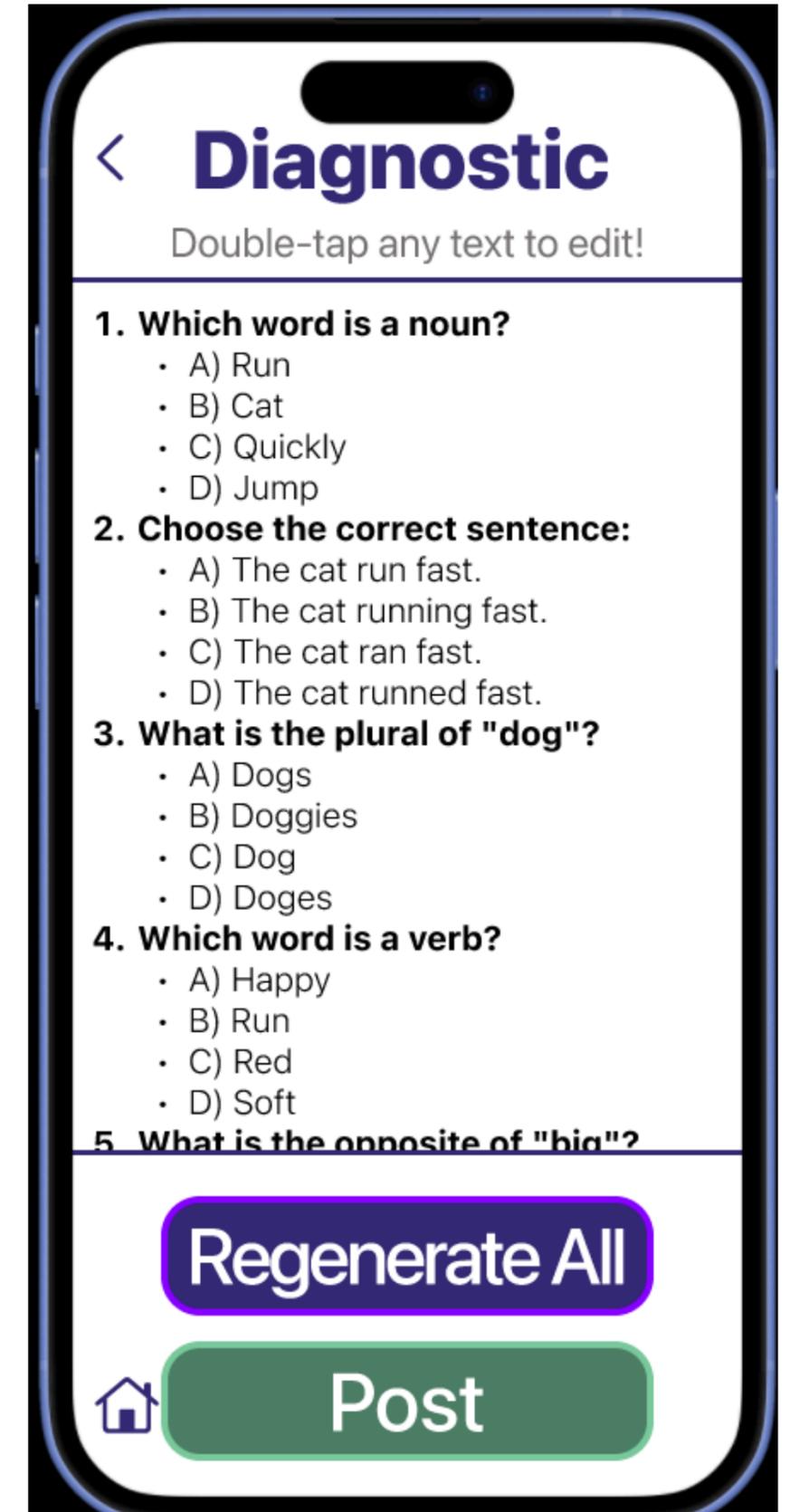
Changes

- Bolded questions for distinguishability/visibility
- Indicates scrollability using peeking text
- Added option to 'regenerate all' to add consistency with feedback

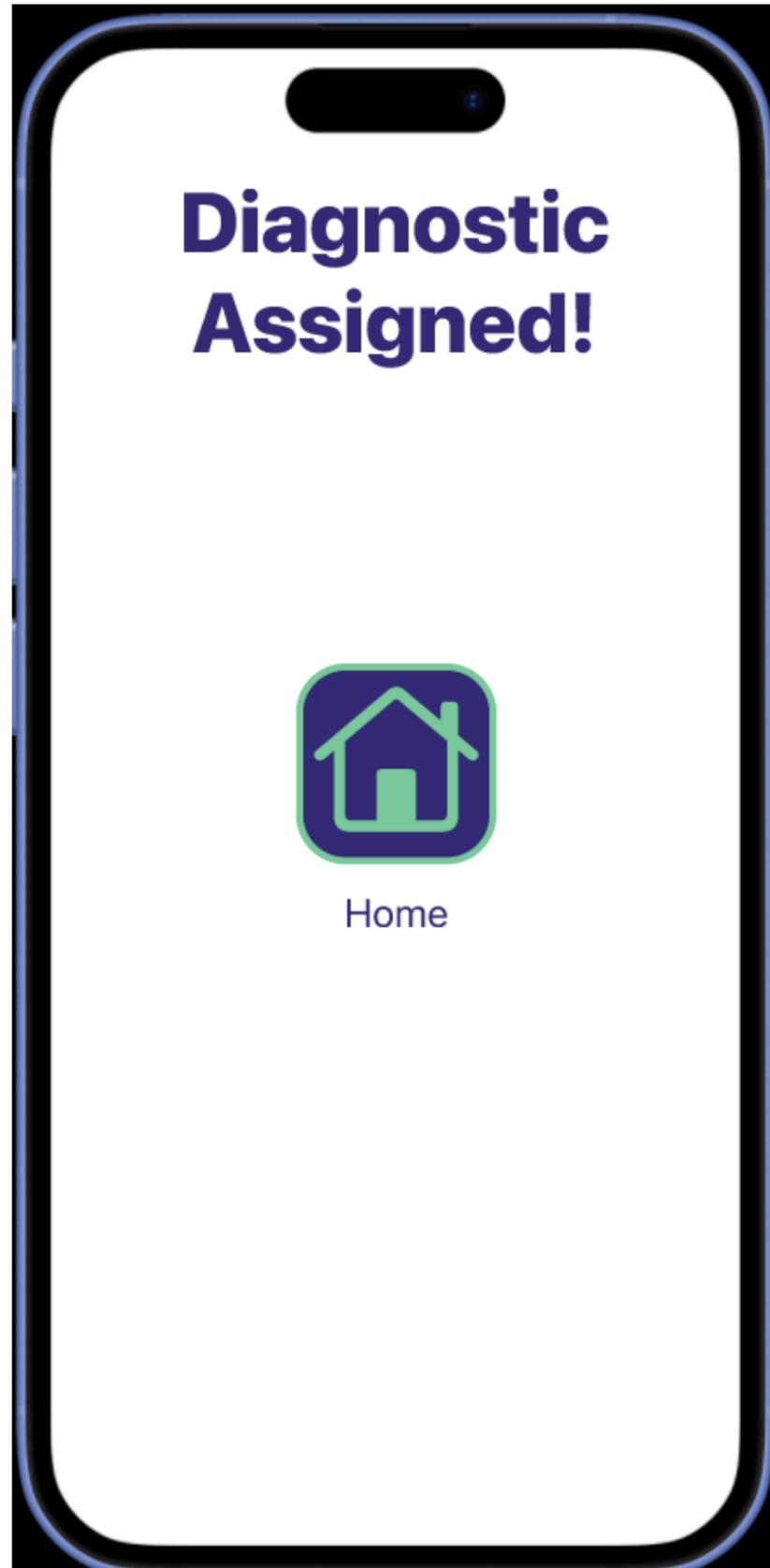
Justifications

- Bolding the questions enhances their visibility and makes them easier to distinguish from other content.
- Indicating scrollability with peeking text guides users to explore easily.
- The "regenerate all" option adds consistency with feedback, streamlining the process and making it more intuitive.

After



Before



Post Diagnostic

Changes

- Added option to undo
- Added success marker

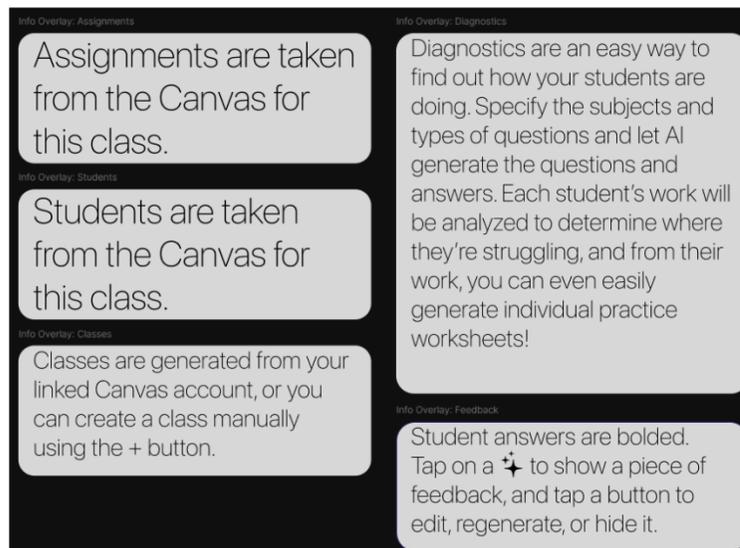
Justifications

- Adding the option to undo provides users with flexibility and error correction, enhancing confidence in their actions.
- The success marker offers clear feedback, reassuring users that their action was completed successfully.

After



Before



Info Boxes

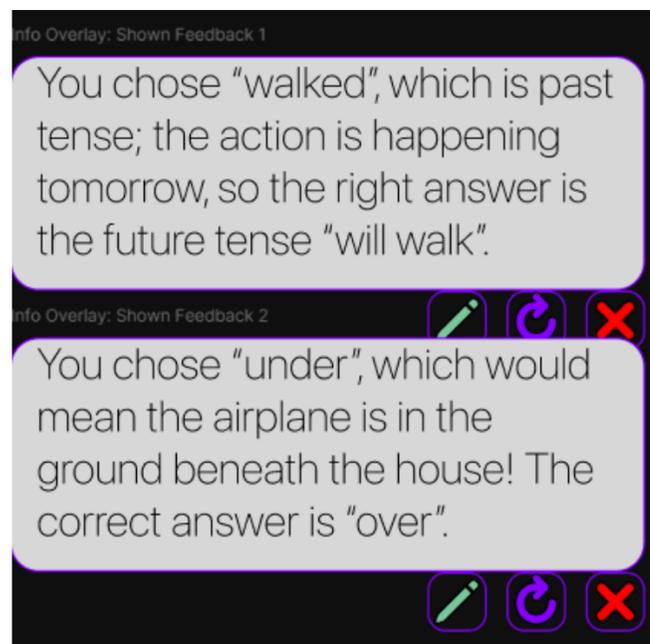
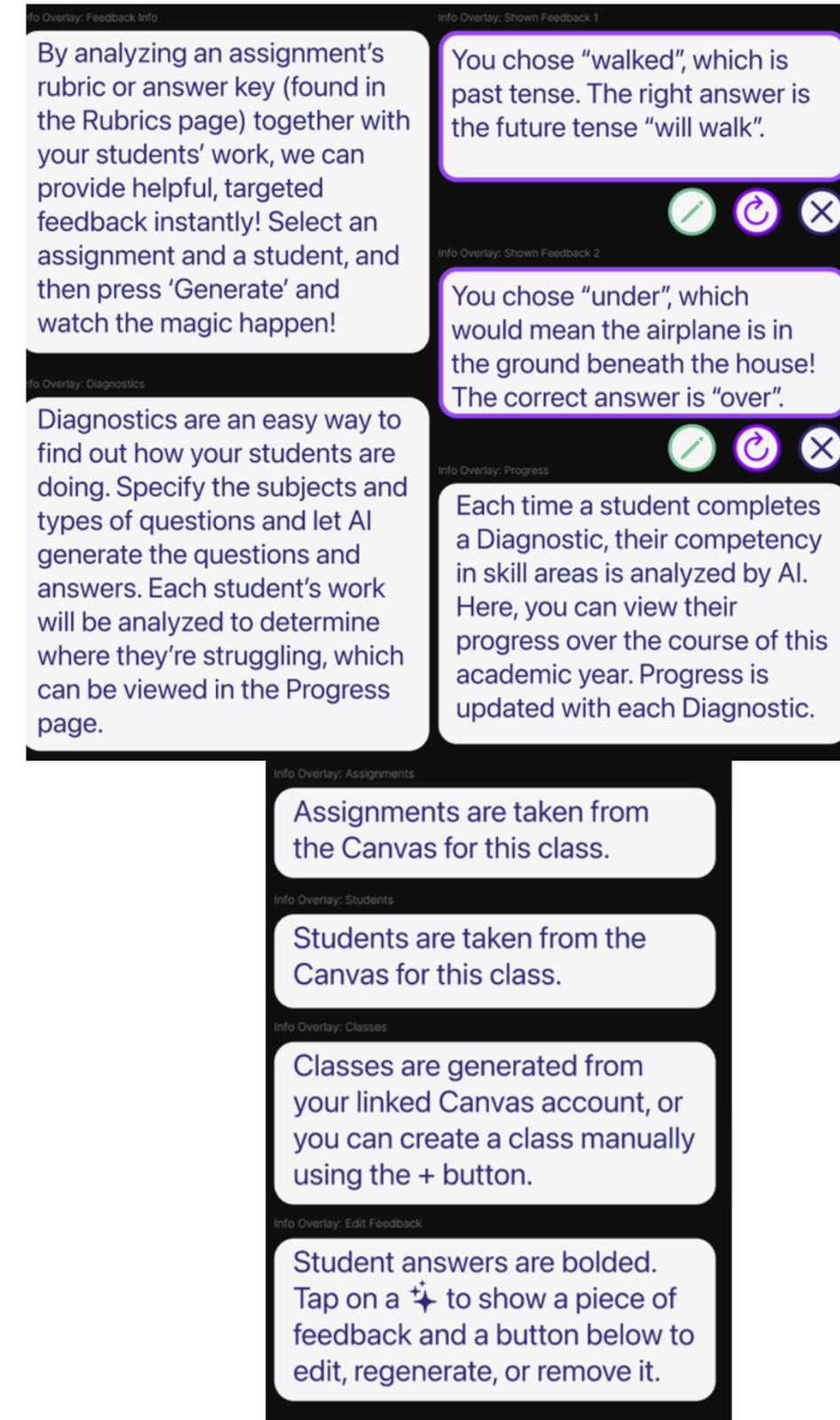
Changes

- Improved readability & contrast overall
- Added additional info boxes where necessary throughout app
- Redesigned in-overlay buttons (for editing feedback)

Justifications

- Improving readability and contrast enhances accessibility makes the app easier to use for all users.
- Adding more info boxes provides helpful context where needed, improving clarity.
- Redesigning in-overlay buttons for editing feedback ensures a more intuitive and consistent user experience.

After



Progress towards Usability Goals

Enhanced Readability: By improving contrast, bolding key elements (like questions), and refining overall text legibility, the app becomes more accessible. These changes ensure users can easily read and understand content without strain. Clear and readable text also makes navigation and task completion more efficient.

Clear Documentation & Information: The addition of tooltips, info boxes, and success markers throughout the app provides users with instant access to explanations and context. This documentation helps users understand functionality, reducing confusion and making the app more intuitive. These contextual aids also allow users to quickly learn how to use the app without needing external resources or support.

Consistency & Familiarity: Changes like renaming buttons to more intuitive terms (e.g., "Diagnostics") and redesigning in-overlay buttons for feedback editing contribute to consistency across the app.

User Control & Feedback: The addition of features like the ability to undo actions and clear success indicators provides immediate, understandable feedback. Users feel more in control, knowing they can correct mistakes easily.

Prototype Implementation Status pt 1

a. Framework/Tools being used:

- Framework: React Native with Expo
- Libraries:
 - expo-router for navigation
 - react-native-chart-kit for rendering progress charts
 - FlatList for listing students and categories

b. Implemented features:

- Displaying a list of students with initials or placeholder images.
- Navigation from classes to student details and progress pages.
- Dynamic bar chart showing overall progress per student.
- Expandable categories for detailed progress metrics.
- "Give Feedback" and "Add Notes" action buttons.

c. Unimplemented features & plans to finish:

- Integration of real backend data for student profiles and progress.
- Real-time updates to progress charts from input data.
- Editable "Notes" and "Feedback" sections.

Prototype Implementation Status pt 2

d. Wizard of Oz techniques:

- Hardcoded student progress and category details to simulate functionality.
- Placeholder chart data for each student to mimic real-time data.

e. Hard-coded aspects:

- Static student list with predefined names and progress data.
- Fixed category names and details under the progress section.
- Navigation paths without dynamic backend integration.

f. Issues/Questions:

- Chart scaling: Adjusting chart responsiveness for smaller devices.
- State management: How to manage dynamic updates when actual data is integrated.
- Expandable list: Ensuring fluid UX for expandable categories without visual glitches.