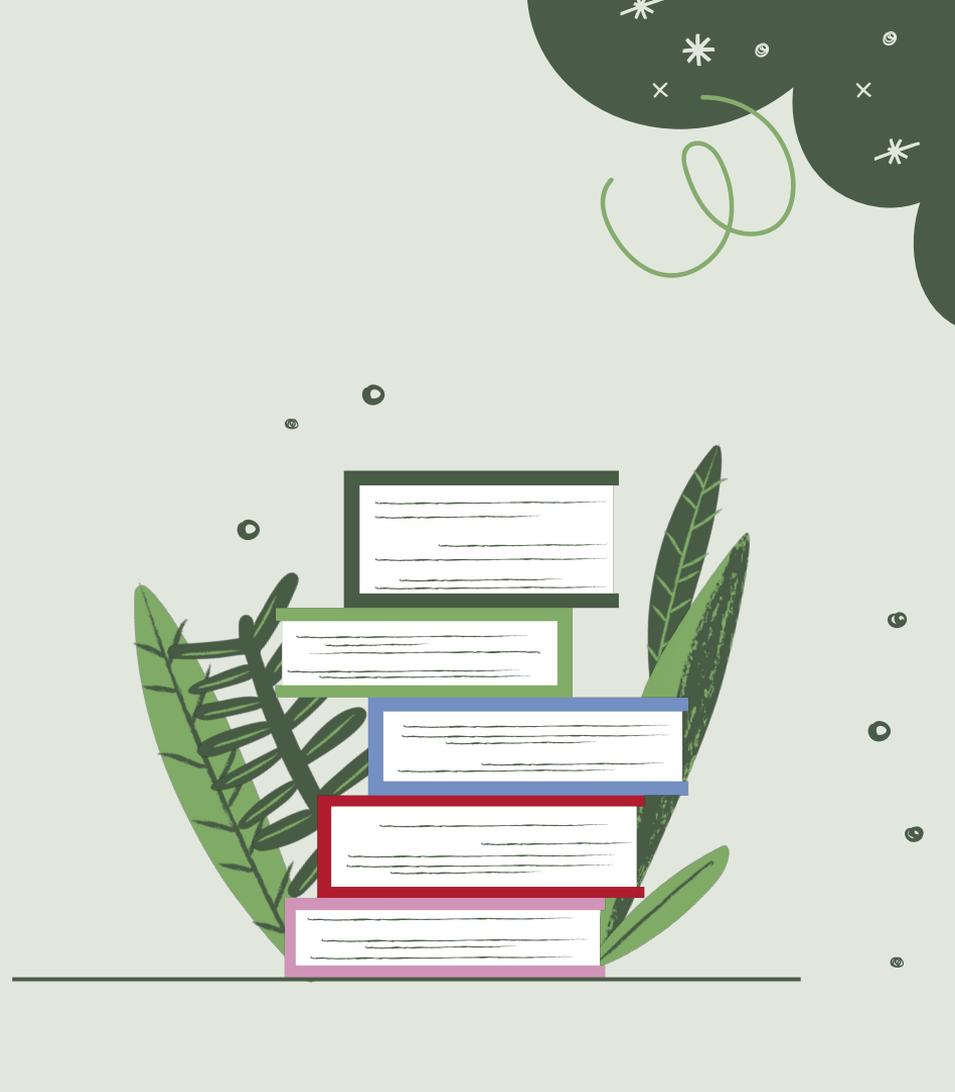


roots

connecting for us

Aimen E, Mai H, Naomi L, Angela W



team



Naomi



Aimen



Mai



Angela

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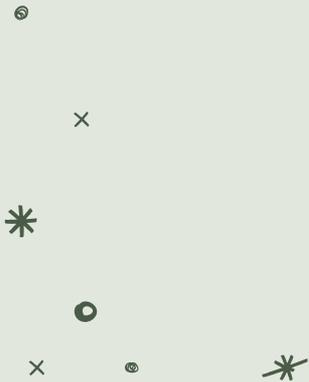
01 ———
our solution

02 ———
heuristic eval
results

03 ———
major revisions

04 ———
implementation
status

05 ———
demo





01 — problem + solution

problem + solution

Problem

immigrant parents and children often struggle to connect across cultural and generational gaps.

Solution

roots provides culturally-sensitive guided learning modules, in-person activities, and reflection spaces that make it easy and natural for parents and children to talk, preserve their heritage, and strengthen their bond.



02 — heuristic eval results



violation summary

Heuristic	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of System Status	0	1	3	1	0	5
H2: Match b/w System & World	0	3	1	0	1	5
H3: User Control & Freedom	1	0	1	2	2	6
H4: Consistency & Standards	0	4	3	2	1	10
H5: Error Prevention	0	0	1	2	0	3
H6: Recognition not Recall	0	1	2	1	0	4
H7: Flexibility & Efficiency of Use	0	0	3	2	0	5
H8: Aesthetic & Minimalist Design	0	2	1	0	0	3
H9: Help Users with Errors	0	0	1	0	0	1
H10: Help & Documentation	0	1	0	0	0	1
H11: Accessible Design	0	2	0	1	1	4
H12: Value Alignment & Inclusion	0	1	2	2	1	6
Total Violations	1	15	18	13	6	53

most frequent violations

10

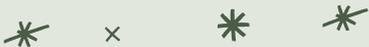
H4: Consistency & Standards

6

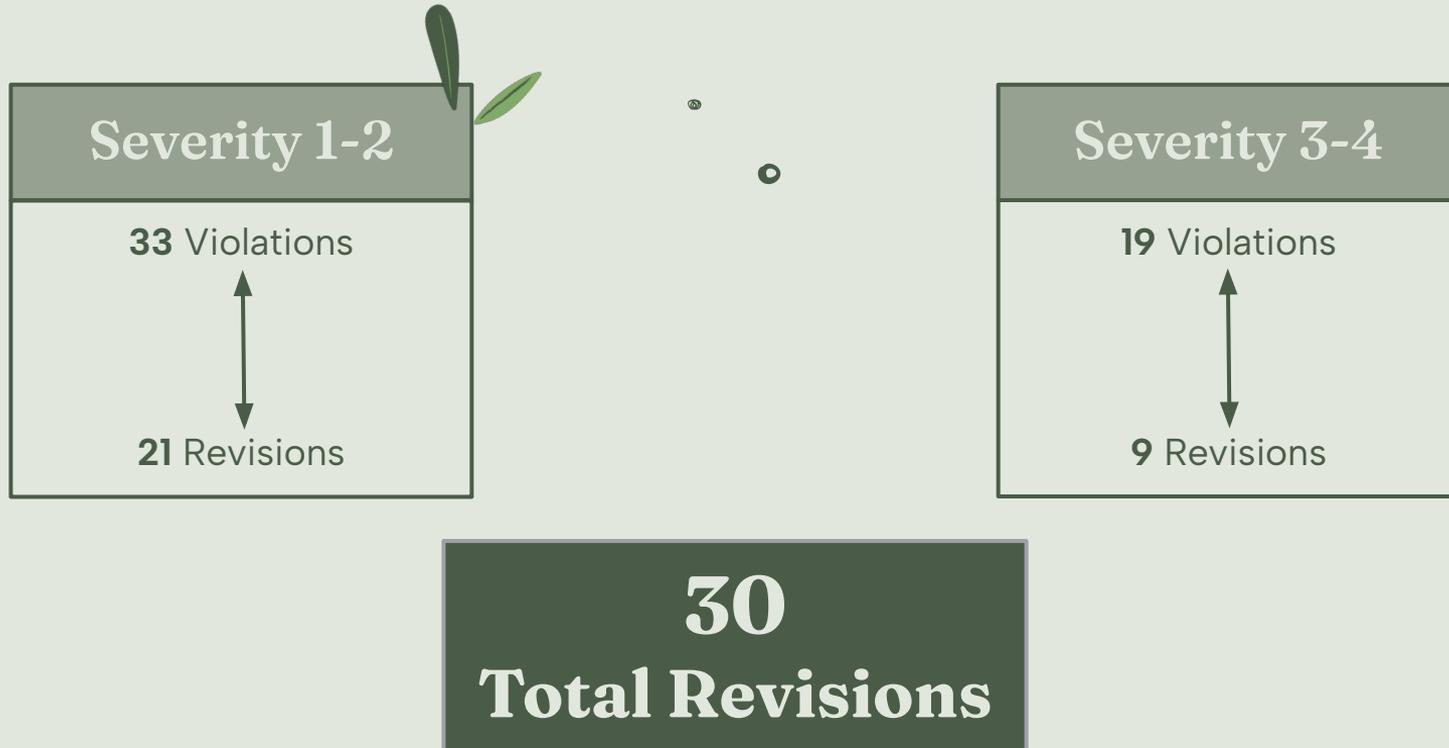
H3: User Control & Freedom

6

H12: Value Alignment & Inclusion



total revisions



unincorporated feedback

Intention of App

“Text assumes parent-child relationship only”

“Excludes users with other family roles”

Consistency

“Go home” link differs from bottom navigation icons (e.g., learn, not home). Therefore, users may get confused about what “going home” entails without prior knowledge that learn tab is actually the home tab”

User Capabilities

“Scrapbook feature uses game-like terminologies: “Unlock”, “Play Challenges”...For immigrant parents preserving cultural heritage, game-like framing undermines the emotional significance of documentation”

important takeaways

Accessibility

- Captions for videos, Voice Option for readings
- User understanding of app functionality

Functionality

- Choices for optimized task flow (Save & Exit, Skip, etc.)
- Flexibility (Edit, Delete)

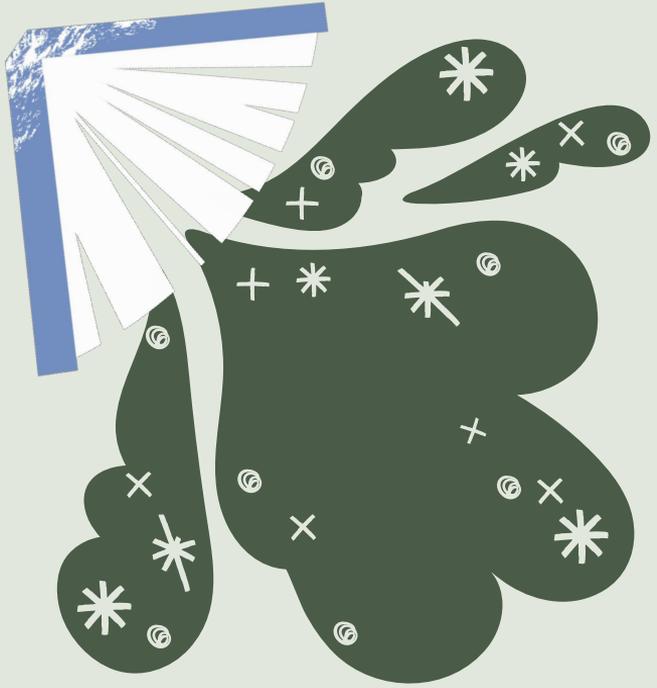
Error Prevention

- Confusing or inconsistent wording
- Clear descriptions for non functional aspects (ie locked game that needs to be unlocked)

Navigation & Tasks

- Confirmation from the app of completed tasks (uploading photo, completing learning module)





03 —
**major
revisions**



Usability Goals

Goal #1: Ease of Navigation

How intuitive is it to use our app?

Goal #2: Eagerness to Use

How likely is it that users would use different features of the app, on a scale of 1-10?

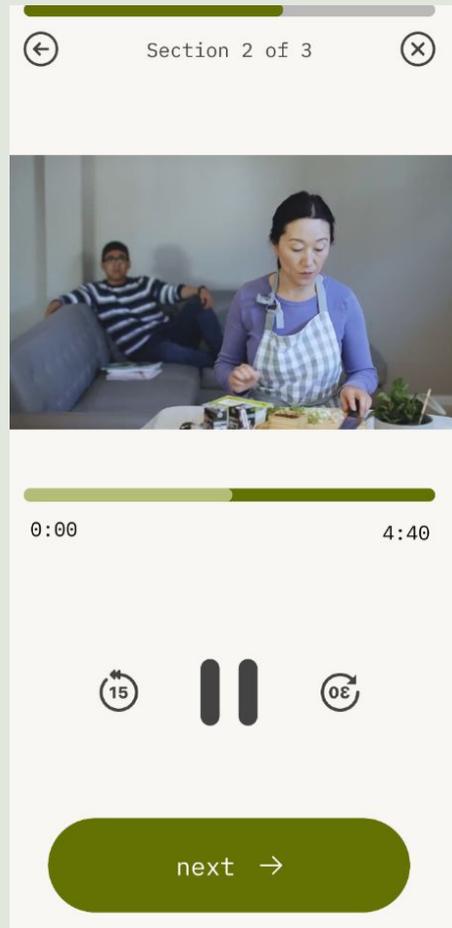
11 Addressed Concerns

Violation Level: 3-4

simple task

concern #1

- [H11] No captions for videos, which may be difficult for speakers where English isn't their first language.



Violation Level: 3-4

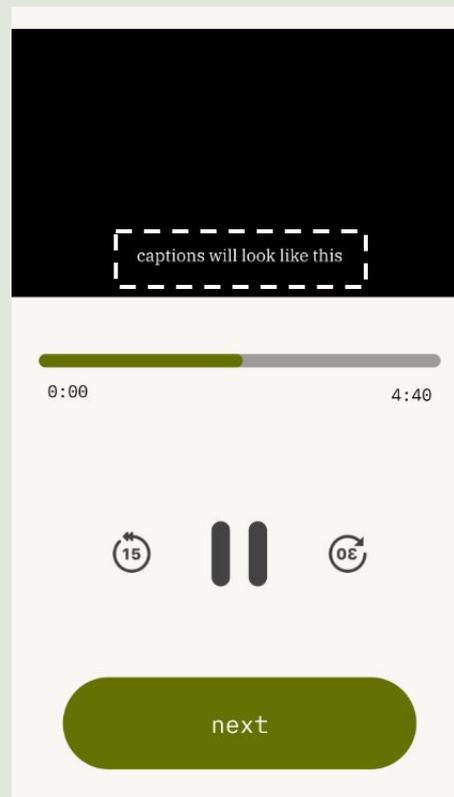
simple task

revision

- Added captions on videos

rationale

- Accessibility for all is a key value for us
- Being Deaf or Hard of Hearing should never restrict the user's experience

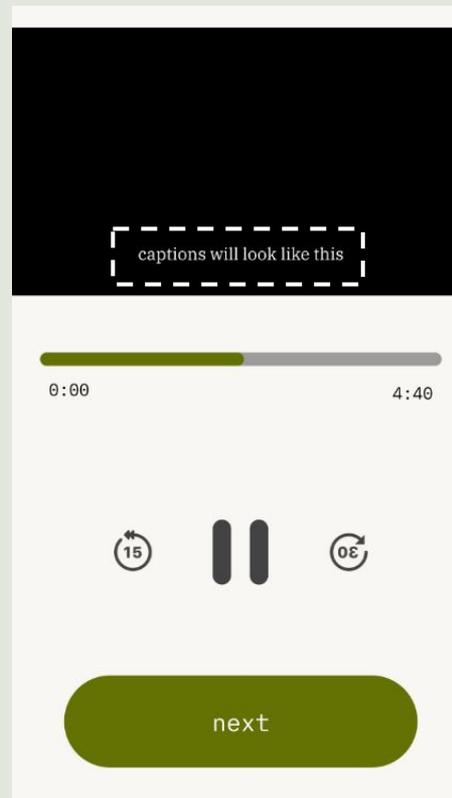


Violation Level: 3-4

simple task

impact

- this makes further progress towards our design value of making the app more culturally sensitive
- it also helps further achieve our **second usability goal** of making users **more eager to use** our app again



Violation Level: 3-4

simple task

concern #2

- [H3] Once a user hits "Finish," there's no way to go back to edit their reflection or even look at their old reflection.

Write a message to your child about a behavior that occurred this week.

Your goal is to: name your feeling, describe the behavior, explain the impact on you, and make one clear request using I statements.

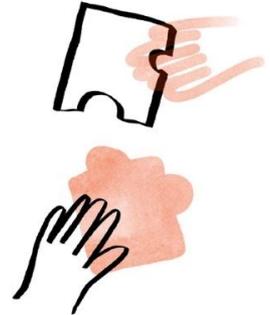
This is my very important response. I am an immigrant parent.

finish

Congratulations!

You unlocked your first challenge!

Level 1: Conversation starters



play

[go home](#)

Violation Level: 3-4

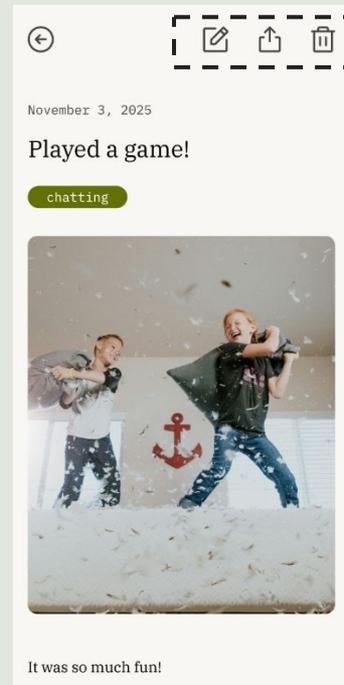
simple task

revision

- Added edit and delete button
- Added option to see lesson reflection in scrapbook

rationale

- User freedom is crucial
- Lesson reflection is a core aspect of app intent

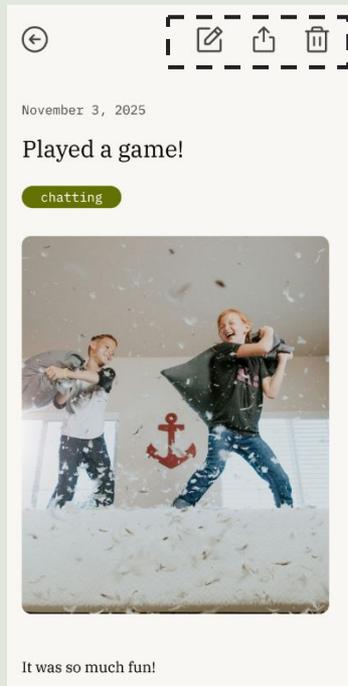


Violation Level: 3-4

simple task

impact

- this would advance our progress towards achieving our first **usability goal** of making the app **easier to navigate/more intuitive**.



Violation Level: 3-4

simple task

concern #3

- [H4] Locked Lesson 3 with no explanation: Lesson 3 button appears on the home page but is completely non-functional. Users see it as an available option but cannot interact with it, with no clear explanation of why it's inaccessible or what steps to take to unlock it.

Lesson 3 Communicating clearly



begin lesson 

Violation Level: 3-4

simple task

revision

- Added popup with information about locked lesson

rationale

- Minimize user confusion

This lesson is locked!

Unlock this lesson by learning
the previous lesson.

continue

Violation Level: 3-4

simple task

impact

- this helps make progress towards usability goal #1 – making our app more intuitive by reducing the number of misclicks

This lesson is locked!

Unlock this lesson by learning the previous lesson.

continue

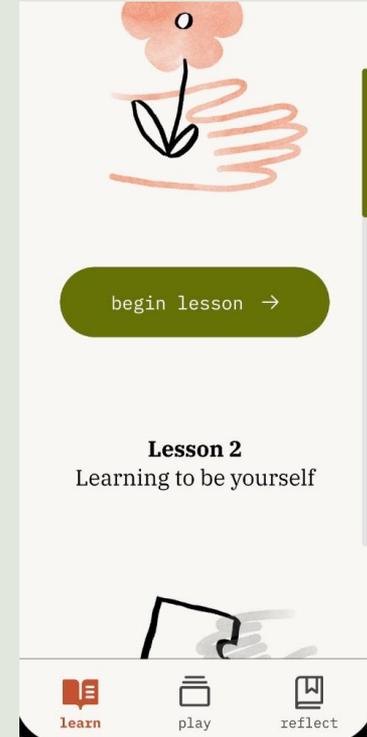
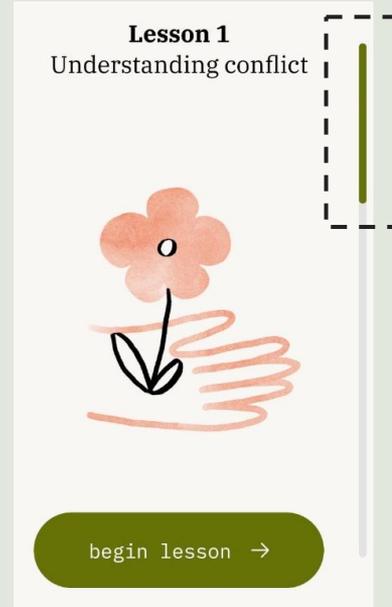


Violation Level: 3-4

simple task

concern #4 and #5

- [H6] No indication, especially for older users, that the scroll indicator on the right of the "Learn" tab means that there are multiple lessons if you scroll down.
- [H7] When users complete a task, they must scroll down to the next task available, which may take a long time if they have completed many lessons on the app.



Violation Level: 3-4

simple task

revision

- Implemented clearer scroll feature
- Added tap feature to quickly reach lesson

rationale

- Clear design to enable users to use all features of the app



Violation Level: 3-4

simple task

impact

- This helped us make progress towards usability goal #1 – making the app easier to navigate for users



Violation Level: 3-4

simple task

concern #6

- [H7] No visible confirmation after tapping "Finish" that one of the lessons is done and now we are transitioning to a game/another tab.

Write a message to your child about a behavior that occurred this week.

Your goal is to: name your feeling, describe the behavior, explain the impact on you, and make one clear request using I statements.

This is my very important response. I am an immigrant parent.

finish

Congratulations!

You unlocked your first challenge!

Level 1: Conversation starters



play

[go home](#)

Violation Level: 3-4

simple task

revision

- Added popup to view reflection in scrapbook

rationale

- Grant users confirmation about completed actions

Bravo!

View your reflection in the
scrapbook.

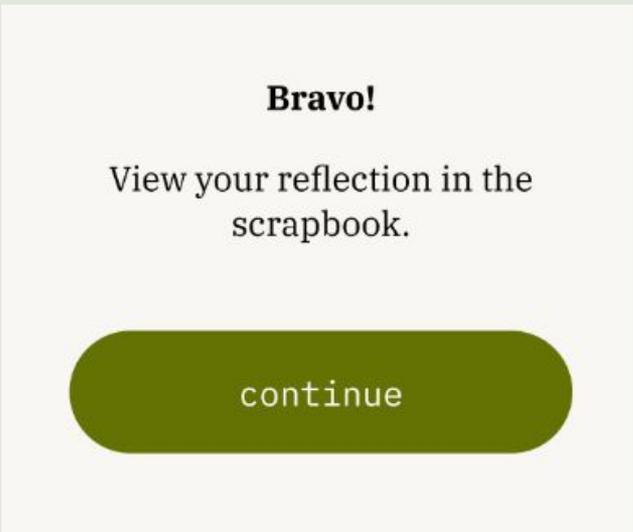
continue

Violation Level: 3-4

simple task

impact

- This design feature makes it more intuitive for users that a lesson is completed thus advancing progress for usability goal #1 - ease of navigation.

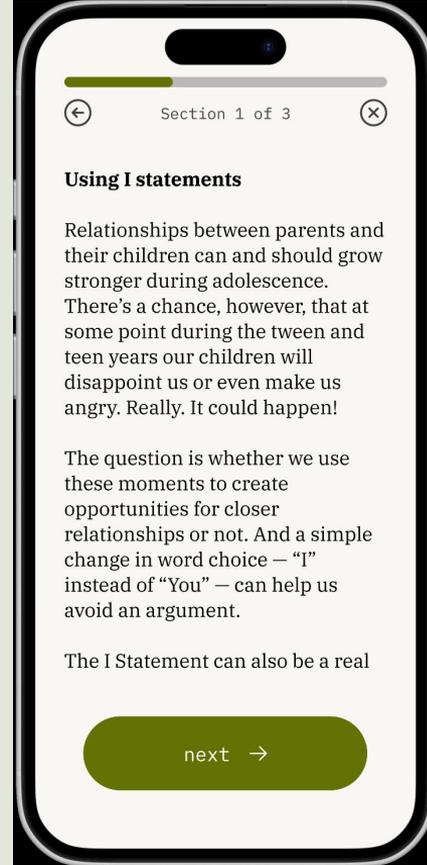


Violation Level: 3-4

moderate task

concern #7

- [H11] Too much text...not readable. Would be nice to have a speaker icon to indicate (text to speech) capabilities that read out the content.



Violation Level: 3-4

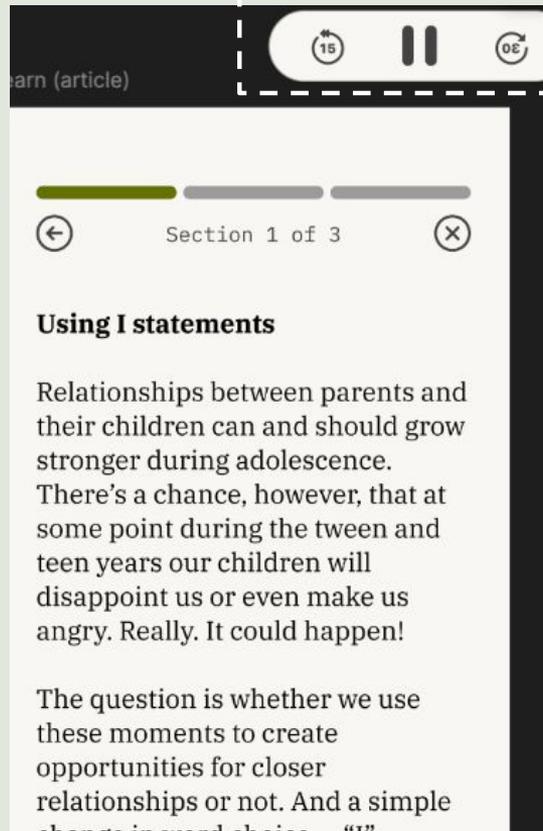
moderate task

revision

- Added voice feature that pops up

rationale

- Value of Accessibility
- Eyesight, age, or other needs should never hinder users from app usage

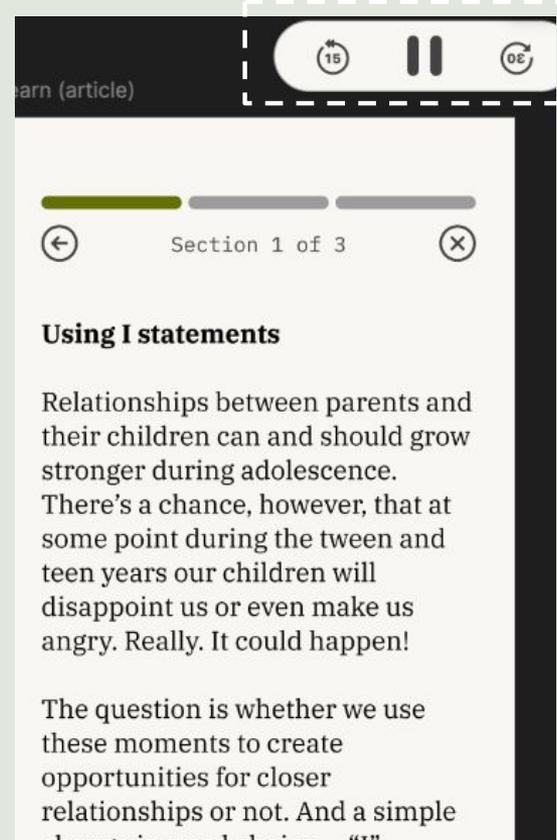


Violation Level: 3-4

moderate task

impact

- This feature helps make the app easier to navigate (achieving usability goal #1)
- It also makes users who are old and don't want to read so much text more likely to use the app again (thus achieving usability goal #2)
- It also helps make our app more culturally sensitive/more inclusive and accessible (design value #2)



Violation Level: 3-4

moderate task

concern #8

- [H2] "Take turns answering cards" -- take turns with who?

How to play:

Take turns answering **green question cards**.

Do **red action cards** together.

Adapted from: parents are human



Violation Level: 3-4

moderate task

revision

- Changed wording of text

rationale

- Minimize user confusion

Invite your child to play with you.

question cards

Take turns with your child answering **green question cards**.

action cards

Do **red action cards** together.

Violation Level: 3-4

moderate task

impact

- This makes the app more intuitive for the user (usability goal #1)

Invite your child to play with you.

question cards

Take turns with your child answering **green question cards**.

action cards

Do **red action cards** together.



Violation Level: 3-4

moderate task

concern #9

- [H3] No clear way to save progress mid-game, if someone wants to take a break or skip the game, the option isn't allowed.



Violation Level: 3-4

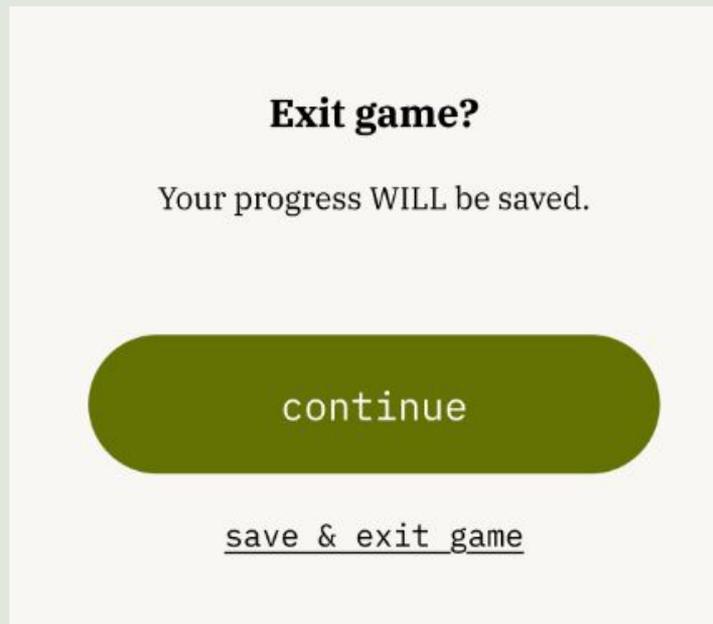
moderate task

revision

- Added "Save & Exit Game" feature

rationale

- User freedom is crucial
- App usage in small pockets of the day

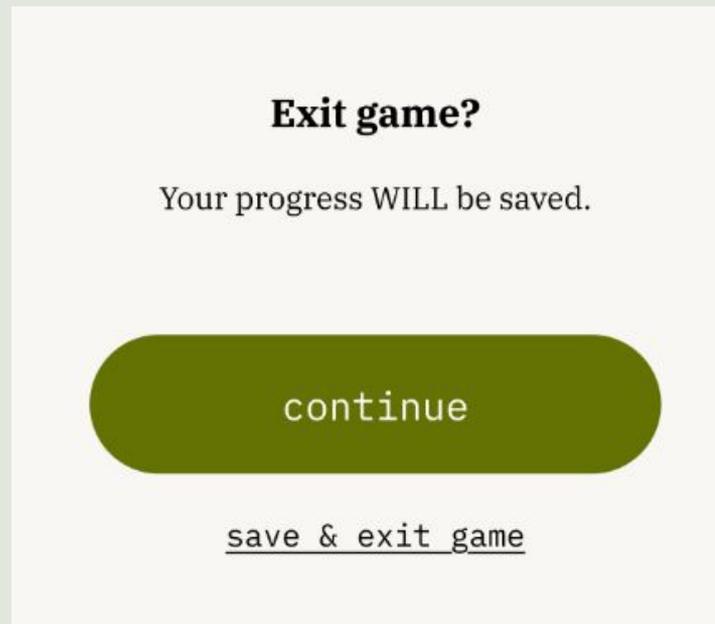


Violation Level: 3-4

moderate task

impact

- This makes the app easier to navigate for the user (usability goal #1)
- It helps users navigate it without additional help/documentations

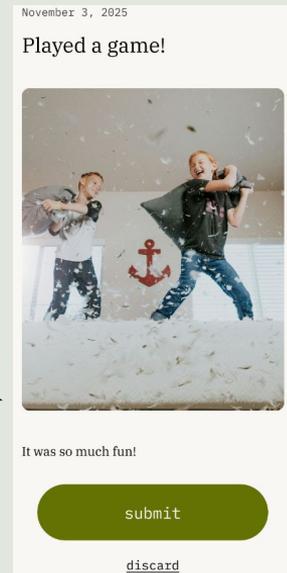
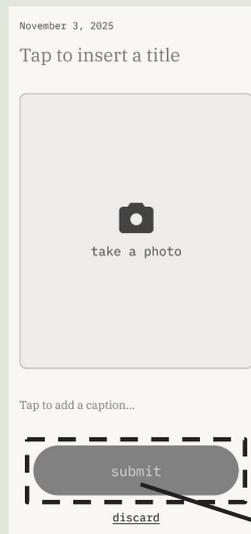


Violation Level: 3-4

complex task

concern #10

- [H3] No clear way to skip scrapbook part of app, if users maybe don't want to take a picture or save the memory.



Violation Level: 3-4

complex task

revision

- Added option for user to skip adding memory to scrapbook and navigate "home" instead

rationale

- User freedom is crucial
- Minimal stops to user flow

Add this memory to your
scrapbook



Reflect on this challenge to document
your memories together.

add memory

no, i want to go home

Violation Level: 3-4

complex task

impact

- This makes the app more intuitive for the user (usability goal #1)
- It also makes the app more flexible to use for users, enhancing feature eagerness to use (usability goal #2).

Add this memory to your
scrapbook



Reflect on this challenge to document
your memories together.

add memory

no, i want to go home

Violation Level: 3-4

complex task

concern #11

- [H3] Once users submit and save a memory to the scrapbook, there is no way to edit or delete it. Users are locked into their submission even if they made a typo, want to update a caption, or accidentally saved the wrong memory. There is no undo, no delete option, and no escape from the submitted box option.

Congratulations!

You added your first memory!



Played a game!
November 3, 2025

view scrapbook

Your scrapbook



Played a game!
November 3, 2025



learn

play

reflect

Violation Level: 3-4

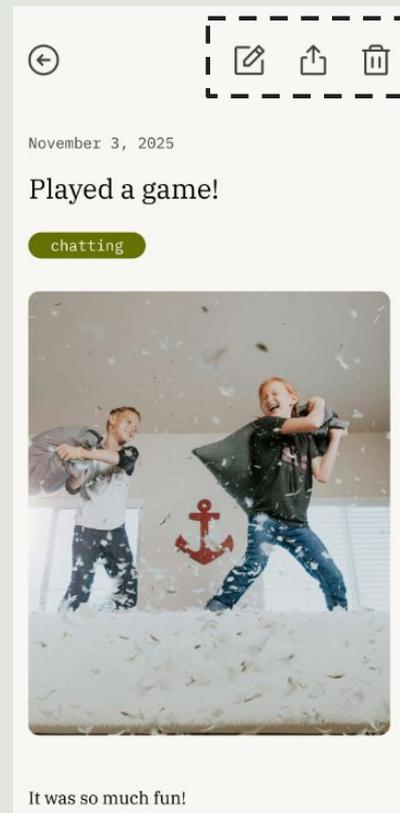
complex task

revision

- Added edit & delete options for memories submitted to the scrapbook

rationale

- User freedom is crucial
- Lack of pressure with user actions

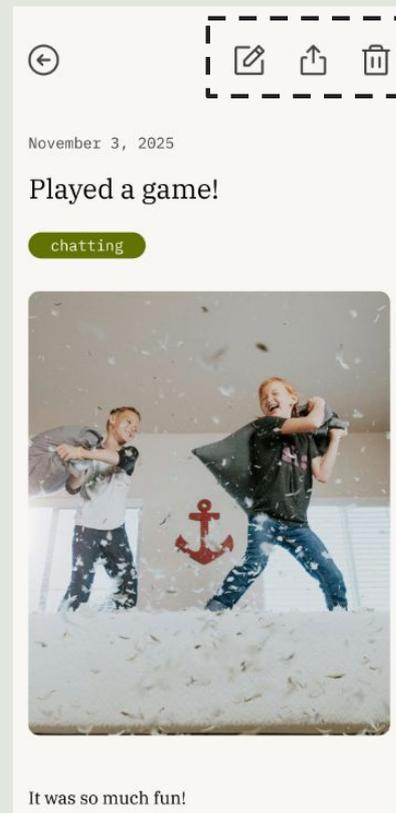


Violation Level: 3-4

complex task

impact

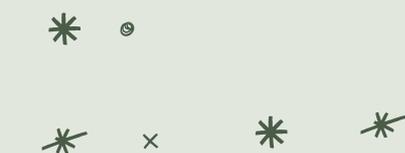
- This allows user more control and freedom to use the app, making them more eager to use it again (usability goal #2)





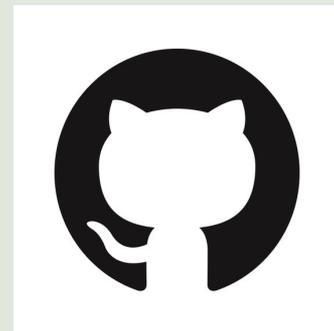
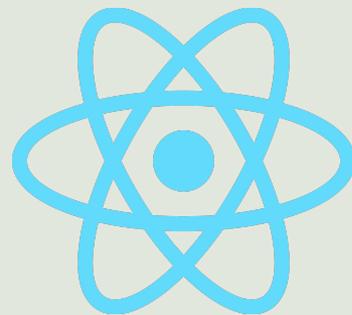
04 —

implementation status



frameworks & tools

- React Native
- React Navigation through Expo Router
- Supabase (backend)
- Figma (design)
- Github (version control)
- i18n React library (multilingual support)



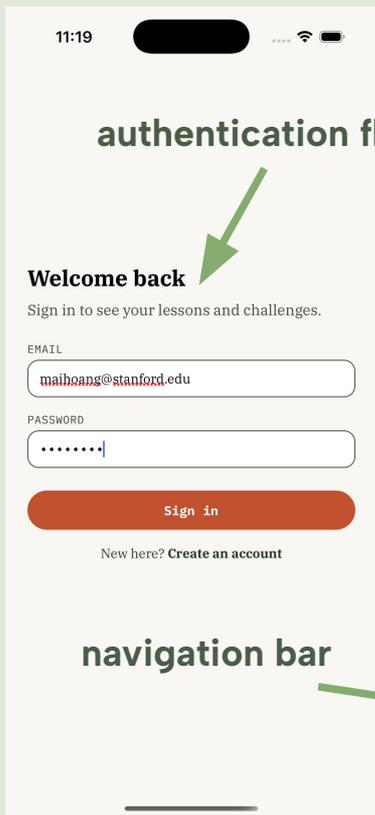


implemented features

moderate task
playing a game



implemented features



"play" page (moderate task)



multilingual support



unimplemented features

simple task

- completing a lesson
 - completing quiz(zes) in lesson
 - saving written responses to Supabase
- save lesson completion / progress to Supabase
- "unlock" game 1 upon lesson completion

moderate task

- add edge function to Supabase to translate fetched data
- add additional games and card decks to Supabase
- define logic in Supabase to "unlock" new games

complex task

- add a memory
- save memory to Supabase
- dynamically update scrapbook UI

plans to finish

mon, 11/24

Mai: implement extra features for moderate task

friday, 11/28

Naomi & Aimen: simple task and complex task complete

wed, 12/3

Naomi, Mai, Aimen: finetune all tasks, attempt stretch features

fri, 12/5

turn in hi-fi

Priority: completing task flows

- Aimen: complex task
- Naomi: simple task
- Mai: continue building out moderate task + multilingual support, and support simple/complex task implementation

wizard of oz techniques

- “Multilingual” toggle with partial/manual translations, not many languages supported
 - Why: let us test whether families value multilingual support
- “Fake-ish” card deck shuffle
 - Why: simulate real game logic, experiment with play modes before investing in advanced logic
- Visually “locked” games and components but not tied to real logic in Supabase
 - Why: simulate progress for users



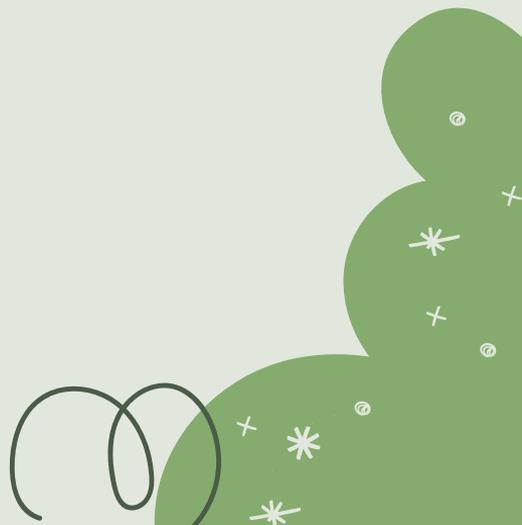


hard-coded aspects

- **What:** Deck structure (categories, number of cards shown), navigation flows, and some UI copy / language keys are hard-coded in the client
 - **Why necessary:** lets us quickly test flows and content structure without building complex configuration tools or logic
- 



questions/issues

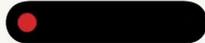
- **Game progression & unlock logic**
 - hard to rigorously define when decks/games unlock, how difficulty should ramp, and how to encode that logic technically
 - **Multilingual at scale**
 - challenging to manage high-quality translations
- 



05 — demo



12:07
← Camera



Welcome back

Sign in to see your lessons and challenges.

EMAIL

you@example.com

PASSWORD

.....

Sign in

New here? [Create an account](#)

Thank You

