



roots

A6: Medium-fi Prototype Instructions

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[link to prototype](#)

what is roots?

roots is designed for immigrant parents, who often struggle to connect with their children because of generational and cultural barriers. 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.

design tools

We used Figma to design and wireframe. We used [Phosphor Icon's](#) icon library, as well as placeholder images from Unsplash and [Icons8](#). We also borrowed learning content from [Stanford CHIPAO](#). The rest of the design elements – buttons, screens, navigation, etc. – were made from scratch in Figma.

operating instructions

general

- The prototype can be navigated through clicking on the buttons on the screen. Most buttons are functional. If any other area on the screen is clicked, clickable areas will appear in a blue box. (This is a feature of Figma.)
- The flow starts from the onboarding flow, landing on the home page, after which users *will* flow through each task. You must complete a lesson in order to unlock a game, and you must complete a game in order to unlock the reflection page. Before then, the prototype will display empty states for the play and reflect page.
- The current flow of the app is designed for one run, meaning that repeating certain tasks will result in “unlocking” the same tasks. For example, repeating Lesson 1 will result in unlocking the same challenge, even if it has been already completed.
- To enter text, click on the text entry boxes. This will then populate the text box with pre-generated example text.
- In accordance with convention, overlays may be closed by clicking on the green button inside of it, or the background. Some buttons may have a text-only button below that returns you to the page you were previously on.

onboarding

- Users are prompted to select their language. Currently, the only available language is English; click on English to continue. This is due to the limitations of Figma. In the future, more languages will be available.
- The Chinese language option takes some time to load – this is a Figma bug.
- There is no intake survey because we are concerned about data privacy and usage. Moreover, there is currently no way to customize the app according to their interests and preferences.

navigation bar

- Each button will take you to a new page: learn, play, and reflect. You may click on any button in order to explore the app even if you have not completed a lesson or a game.

- If the user has not finished a lesson, the play page will display an empty state. Similarly, if the user has not finished a game (challenge), the reflect page will display an empty state.
- Once users have completed a lesson, the play page will populate with games; once users have completed a game, the reflect page will populate with (hardcoded) memories.

learning

- The user will first land on the “home” page, learn. This page currently only displays three hardcoded lessons; only the first lesson is available to learn, even if you have completed lesson 1. Lesson 2’s button is nonfunctional.
- The scrollbar, due to the limitations of Figma, is nonfunctional. It appears in order to emphasize the fact that you can scroll on this page.
- We are only attempting to demonstrate the UI; therefore, the exact content in the lessons is not necessarily the content that will be displayed in the real app.

learning a lesson

Note: In the future, the “next” buttons during the lesson will only be activated upon completion of the activity in the lesson. For example, in the reading, upon reaching the bottom of the reading, the “next” button will turn green. Due to the limitations of Figma, we were not able to implement this feature.

- The lesson begins with a short introduction on the contents of the lesson. During each lesson, there will be several components – not every component will be the same format. However, the four formats will be reading, reflection, video, and audio.
- For demonstration purposes, we have included only three sections in this beginning lesson – a reading, a video, and a reflection – sections which will not actually teach a coherent topic. Future lessons *may be longer or shorter* depending on the topic we teach.
- Upon clicking the exit button during the lesson, a popup will appear that confirms exit learning. Currently, progress will NOT be saved, due to the limitations of the Figma prototype. However, in the future, your progress *will*

be saved. The “continue learning” button returns you to the lesson; the “exit learning” button returns you to the learning page. You may click on the “continue learning” button or the background in order to exit the popup.

- On the video page, the buttons are nonfunctional. There is no way to pause the video or rewind; this is a limitation of Figma.
- After completing the lesson, you will unlock your challenges. (*This will happen every single time you complete the lesson, even if you have already unlocked your challenges; this is a limitation of the prototype.*) Clicking the play button will then take you to the newly populated play page. *Furthermore, you will unlock the subsequent lesson.* (As noted above, the subsequent lesson is nonfunctional.)

play

- Due to a Figma-related bug, you may have to scroll up in order to view the real page.
- On this page, the information button opens a popup that explains the concept of the challenges. You may click on the “got it” button or the background in order to exit the popup.
- There is currently only *one* game available to play. After you complete the game, it will visually unlock the next game. However, it doesn’t work.
- Click anywhere on the “level 1” button to play the game.

playing the game

- Each level is going to be generally the same format: question cards and action cards. Some games in the future might have more complicated mechanics, like timers. For now, the mechanics are extremely simple.
- Like the play screen, there is an information button that you can click to explain the purpose and intention of the challenges.
- For now, level 1 is hardcoded – there are only five questions which are the same. In the future, however, each level will be replayable, because each level will have a randomized set of questions which draw from the same pack. Moreover, there might be more or fewer questions depending on the level.

- On the first two questions/actions, there is a brief in-app “tutorial” (the text) that further explains what to do when confronted with a card: “Do this action!” or “Take turns answering this question!” This will only be displayed for the first two cards every time.
- The navigation bar behaves exactly the same as the navigation bar in the learning module: clicking exit will open an overlay, and clicking the back button will go back.
- After completing the game, you will unlock your scrapbook. *Unlike the lessons, if you complete the game again, it will skip unlocking the scrapbook (limitation of prototype).* Then, it will prompt you to “add this memory,” and lead you to the adding a memory page.
- After completing the game, you will also unlock level 2. Level 2 is not playable.

adding a memory

- You may click on any of the “tappable” areas of the screen – tap to insert a title, tap to add a caption, take a photo – in order for the whole screen to auto-populate.
- Then, when you submit, it will confirm that you have added a new memory.
- Once you have added a memory, it will take you to the reflect page.
- The date is automatically populated, but it is currently hardcoded (it will not reflect the current date.)

reflect

- This page will display an empty state if you have not unlocked challenges or the scrapbook.
- For demonstration purposes, once you *have* added a memory, there are three of the same memory. Of course, the memories will be different in the future, and there will only be three memories if you add three memories.
- *If you have unlocked your scrapbook page but you have not added a memory, it will still display the empty state. This is a limitation of the prototype.*
- You may click on a particular memory in order to navigate to a page for that specific memory. *On this screen, the edit button does not work.*

limitations

- The scrollbar on the home page does not work.
- On the video page, the buttons are nonfunctional. There is no way in Figma to actually pause the video or rewind using the buttons; the video will autoplay no matter what.
- There is also no way for the “next” button in the lesson to dynamically change depending on whether the user has read the text or watched the video.
- We did not implement saving progress during the lesson because that required an excessive amount of backend work.

hardcoded

- When doing a reflection in a lesson or adding a memory, all of the inputs are hardcoded. This is because the prototype cannot store input.
- The questions for level 1 are currently hardcoded. In the future, each level will be replayable, because each level will have a randomized set of questions which draw from the same “pack.”
- The date when adding a memory is hardcoded. Moreover, all of the memories in your scrapbook are currently hardcoded.

“wizard of oz” techniques

Once you have completed level 1, the scrapbook automatically populates with three memories, to demonstrate what multiple memories would look like.