

Heiroom Memory Pod - UX/UI Test Results Round #1

Overview of usability testing setup

In our first round of usability testing, we interviewed 3 participants. We recruited participants by convenience, inviting faculty and students from the Engineering Psychology and Human Factors program at Tufts. The session setup included paper copies of the Figma prototype of our Memory Pod interface, numbered stickers, and a phone as a recording device. The average duration of the interviews was 40 minutes.

Our participants ranged in age from 21 to 55, and they all had similar degrees of exposure to technology. They were comfortable with mobile interfaces and social media. These details about our participants aided us in determining the pace of the usability testing session. We showed participants screens and asked them questions such as, "What would you expect after clicking this button?" and "Do you feel that this interface provides you with adequate feedback about finishing a task?" We showed the remaining printed out screens until we had gone through all of the features we wanted to test.

What are the main usability findings?

Task	Finding	Recommendation
Create an account: participants had to simulate creating an account with the Memory Pod.	The verification model expecting an email account may not be ideal for seniors because they may not have an email account or may have forgotten their passwords.	The Memory Pod could support facial recognition for returning users. This should help seniors with less cognitive ability who may not even remember that they need to sign into their account again after creating it.
Onboarding: for first time users, our interface includes a tutorial experience explaining what the Memory Pod does. Participants had to go through the onboarding screens.	The checkbox for not showing the onboarding screens again is unclear because seniors might not know if they need to check the box to be able to advance to the next page.	We should only show the checkbox at the end after the user goes through all pages of the onboarding.
	Onboarding is text heavy. Some of the problems with the text were related to syntax and unclear messages. For example,	The onboarding should explain what the Memory Pod can do: a highlight of features. Also, we should use more images and less text.

Menu: choosing between adding a memory, seeing timeline, or viewing settings page.	The flow of the memory sharing feature is: first, seniors select that they want to add a new memory to their Memory Pod. Then, they add title, date, and a description and click on a plus sign to choose the format (e.g. video, audio, image). However, our usability testing showed that the first thing a user wants after having decided to record a memory is to decide which format it should take. Adding details like title and date early in the process may be confusing as seniors may change their mind about these pieces of information later.	Seniors should be able to select the format of the memory right after they decide to record one. They would then be taken to the recording screen and after they're done recording they should be able to add details such as title, date, and a description.
Choosing the memory format: deciding which media type to use for recording the memory (e.g. video, audio, or image).	The microphone icon for representing an audio clip is confusing because "it looks like the letter 'e' in a bowl of soup." Identifying the icon as a microphone requires top-down processing, which is one of the cognitive skills that comes harder for seniors.	The icon that represents an audio clip could be a talking face, which should represent less cognitive workload.
Recording the memory.	There should be an indicator that the recording is about to start.	This could be a "get ready message" or even a "I'm ready" button. There could also be a countdown to give time for them to prepare for recording.
	The wording on the screen is "Tell us about your story." This may make seniors think they are already being recorded. This wording choice also implies that every media record is a story. However, this assumption isn't true. For example, seniors may find belongings of loved ones and just want to post a picture to the family network without telling a story..	The wording could be "Get ready to record your memory," which is a broader concept than "story."
	The red dot on the top left corner suggests it's recording, but it alone isn't enough feedback for an older person. Seniors may not notice the static red dot there because of potential cognitive conditions.	The red dot could be flashing instead of being static. There could also be a progress bar showing that it's recording and providing the duration of the recording.
	Before seniors hit the recording button there should be something showing it's NOT recording. Otherwise, they may start talking and get frustrated when they realize it wasn't recording all along.	We would need to brainstorm ways to signal that the recording hasn't started. A gray dot that signals inactivity could be an option.
	There should be a way to start recording again if seniors realize	We could add a "start over" button if they realize they made

	they've messed up.	a mistake. Another option would be to add a screen after seniors press stop recording giving the option to delete the recording and start over.
Add details to the memory: put description, date, and title on memory.	May not need the title or details before the memory is recorded.	Ideally, they should be able to add details after they have recorded the memory. This is because they may change their mind about the title, date, and description after they have recorded the memory.
Sharing the memory: make memory available to other people.	Our prototype didn't include sharing settings. Participants pointed out that they couldn't share the memory with anyone and that posting it to the timeline means everybody would be able to see it. However, there could be a memory that they would like to share with only a few people in the family.	It might be nice to see or hear: "click here to notify others that you're sharing" or even have the option to share directly with someone.
Sharing Memory - task completion notification	User did not know what would happen next after the "you memory sharing was successful" screen came up. No navigation buttons to go somewhere next. Timed screen may not be best because people read at different paces.	Include buttons on the memory sharing successful screen to navigate back home, log out, etc. Just so the user has control over where they navigate to next.
Logout: leave the application.	"Cancel" button to stop logout seems like a double negation. Also, this button is on the left, which suggests users might be going back to previous screens - wrong mental model.	Change the logout prompt to "Would you like to end this session?" or "Would you like to leave the Memory Pod?" and have "Yes" and "No" buttons.

What have you learned and what changes are being made?

We haven't decided yet which aspects of the design we will be prioritizing for changes, but we have an idea of what is and isn't working. We noticed that the log in/sign up flow isn't working. Some of the feedback points to a potential inability to verify identity if it requires email accounts because many seniors may not have an email account or may have forgotten their passwords. Also, the onboarding experience we had first imagined contained too much text, which for seniors with limited cognitive capability it may be challenging to interpret. Moreover, the flow in which seniors can create and post memories to the timeline seems to be confusing. Our current design first asks the seniors to specify information such as the title and date of the memory before they record it. Our testing showed that it doesn't work. The most common mental model would be to click on an add memory button and immediately be able to choose which format the memory should take. Finally, in the screen where seniors would select between adding a memory, seeing their timeline, and viewing settings, we should include a button for prompts and activities from the group working in the ENP 161 class. It will be helpful for Heiroom to have us integrate the work from the ENP 161 team in our user flow.

What surprised you?

Our team was surprised at how much work goes into designing something as simple as a login and signup page. Our product was designed for seniors who are 65 or older and may have limited cognitive capabilities due to aging. We learned that designing for this age group requires more thought into edge

cases. For example, a login that relies solely on an email verification may not be ideal. Also, we learned that things that may be obvious for young people may require extra feedback on the screen for seniors to understand. For instance, our recording page didn't show when and whether seniors should start recording. Even if they pressed the red button, they would only see a red dot on the top. From our experience with recording devices like phones, we know for sure that when the red dot appears on the screen it is a sign that it is recording. However, for a senior it would require top-down processing. In this sense, we were surprised about how icons and buttons are other things that sound simple but that have to be clear at first glance. We can't expect seniors to be able to do second degree inferences as these take too much cognitive workload.

What are your Next Steps?

In addition to reiterating on the first design for the log-in/sign-up pages and the memory sharing feature, we will be consolidating our design of the timeline for the Memory Pod. Our goal is to have a high fidelity prototype by next week to be able to do our second round of usability testing with our demographic.