

TEAM - G65

HCI - EXERCISE SHEET 7

THINGS TO NOTE:

****There were some issues with the PDF merge website so we were not able to merge the responses we got for TLXScale and Consent forms, therefore we made a separate folder for each.****

****Also we have uploaded all the materials in Google Drive. However, when you preview the PDF it is not showing the content properly. So, you'll have to download the PDFs (Consent form and TLX form) to view them.**

The issue is only with the Google Drive, the HCI submission on CMS works fine.**

1. Study Goals

Previously mentioned requirements:

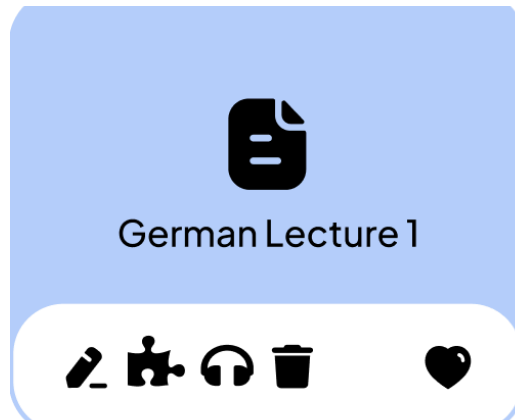
- a) Understandability and easy learning of the platform.
- b) Engaging and Appealing UX/UI.
- c) Error and/or Feedback feature for AI-related issues.

6 Final Questions:

- i) Is the UX/UI appealing to you?
- ii) Does the platform keep the users engaged and interested?
- iii) Are the users able to provide feedback and report errors as and when required?
- iv) How easily were you able to navigate through the interface?
- v) Do users make errors? (If yes, which ones? Why did they make errors?)
- vi) Were the functionalities of our application clear enough for you to understand our ultimate goals?

2. Study Design

- **Previously mentioned main 3 functions (tasks)**
 - 1. Quizzes
 - 2. Podcasts
 - 3. Progress Tracker



[Fig: 2.1] PDF Image showing the icons Edit, Quiz, Podcast, Delete, and Like respectively

a) Study Tasks

i) Quiz:

Introduction: The tool will create quizzes through AI based on the chosen PDF, to help students prepare for exams or brush their skills up.

Instruction: The user navigates to the Study Material page. There the user can upload the pdf which provides them with three options designed as icons. Further, they can click on the quiz icon to take the quiz. They can select their desired answers and by the end of the quiz they get their aggregated score.

Action Sequence:

1. Select and upload the pdf of the topic the user wants to take a quiz on
2. Start the quiz by clicking on the quiz button on the selected pdf
3. Select the correct answer from the given 4 options
4. Proceed through all the questions by selecting "Next"
5. Click on "Finish" to end the test
6. Finally, the result is displayed and can be assessed

ii) Podcasts:

Introduction: The tool will also use AI to convert PDFs into informative podcasts that users can listen to on the go, download, and listen to offline.

Instruction: The user navigates to the Study Material. There the user can upload the pdf which provides them with three options designed as icons. Further, they can click on the podcast icon to generate and listen to the quiz.

Action Sequence:

1. Select and upload the pdf of the topic the user wants to generate a podcast of
2. Click on the podcast button to generate the podcast
3. Pause/play/rewind/etc the podcast as per choice
4. Download the PDF for offline use
5. Click on the "Materials" button to change the selected content

iii) Progress Tracker:

Introduction: The tool will also keep track of the user's learning progress and display it so that the user can keep track of it.

Instruction: The user can click on the user profile icon on the navbar. There they can click on the progress tracker tab to check for their progress, reminders, and login streak.

Action Sequence:

1. Go to the User Dashboard
2. Select "Progress Tracker" from the User Dashboard
3. View your progress respective to the amount of content you have uploaded to the amount of tests you've taken
4. Add/remove reminders
5. View log-in streak

b) Observation Method

- **Types of users:** The type of students will mostly be students and working IT professionals who are most likely to make use of the interactive system designed.
- **The site to be used for the observation:** Pen and paper, offline, or Zoom/Google Meet calls.
- **How observations are recorded:** The observations can be in-person or online. In scenarios, where the person is not available for an in-person interview, it can be done online instead. Audios of interviews will be recorded.

c) Demographic form and consent form

- Questionnaire to collect the demographic of the users: (Google sheet)
<https://forms.gle/NhzyyJzLzEEWx118>
- NASA TLX questionnaire: <https://humansystems.arc.nasa.gov/groups/TLX>

Responses are attached in a separate PDF: G65_questionnaire.pdf.

d) Semi-structured interview:

Introduction:

Hi, thanks for joining us today! You've just tried our application ReWise, which is designed to help users learn more engagingly and effectively. We'd love to hear about your experience using the platform. We'll ask a few simple questions about how easy it was to use, any problems you encountered, and any features that you think could improve it. Your feedback is valuable to us, so feel free to be as honest as you like.

Before starting the official interview, I want you to acknowledge a few things. The first is: Have you filled out and signed the consent form? Next, have you filled out the NASA TLX and the Google form?

So, Let's get started!

Warm-up Phase:

Question 1: How do you think AI tools have changed your learning methods over the past couple of years?

Question 2: Have you participated in usability testing or feedback sessions like this before? If yes, how and what was your experience?

Main Body:

Question 3: Is the UX/UI appealing to you?

Question 4: Does the platform keep you engaged and interested?

Question 5: Were you able to provide feedback and report errors as and when required?

Question 6: How easily were you able to navigate through the interface?

Question 7: Did you make any errors? (If yes, which ones? Why did you make those errors?)

Question 8: Were the functionalities of our application clear enough for you to understand our ultimate goals?

Cool-off Phase:

Question 9: What stood out the most to you about our Rewise application?

Question 10: What irritates you the most about our Rewise application? Do you have any suggestions for solving it?

Closure:

Thank you so much for taking the time to share your thoughts with us! Your feedback is valuable and will help us improve the platform. Feel free to reach out if you have any further comments or suggestions. Have a great day ahead!

e) **Consent form:** Responses are attached in a separate Folder: **G65_consent**.

3. Conduct a Pilot study

The 3 issues that we identified are as follows:

- 1) **Issue:** During the pilot study, we **forgot to have the users fill out and sign the consent form** before conducting the interview.

Solution: To address this in the main study, we ensured that all users completed and signed the consent form before the interview.

- 2) **Issue:** Since we used the same phone to conduct the interviews and record the audio, **multiple misclicks** prevented us from successfully recording the full interview, forcing us to re-record the entire session.

Solution: To prevent this issue in the main study, we used two separate devices: one for recording audio and another for asking questions.

- 3) **Issue:** During the pilot study, the interview exceeded 25 minutes, becoming too long and tiring due to detailed and lengthy questions. Additionally, having to

re-record the entire interview contributed to user fatigue and further extended the time.

Solution: To address this, we shortened and refined our questions to make them more concise, and also we made sure the questions were clear from the start.

4. Conduct the Main study

Google Drive link to access the material:

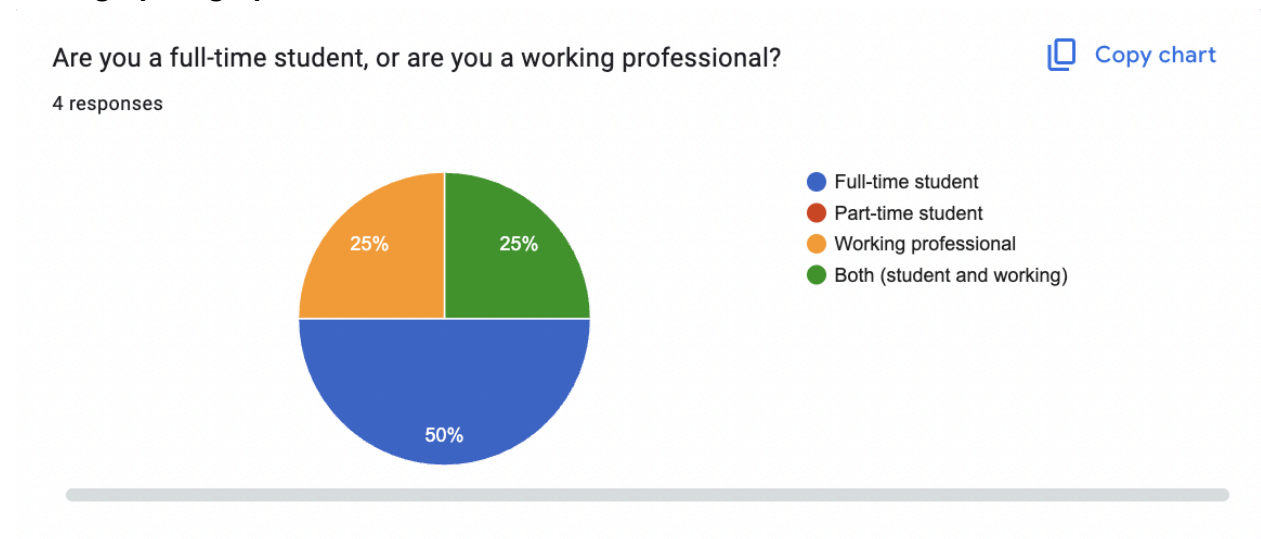
https://drive.google.com/drive/folders/1-1bdzCggIFJmn_8SLLvvXbmZc_79yCaQ?usp=drive_link

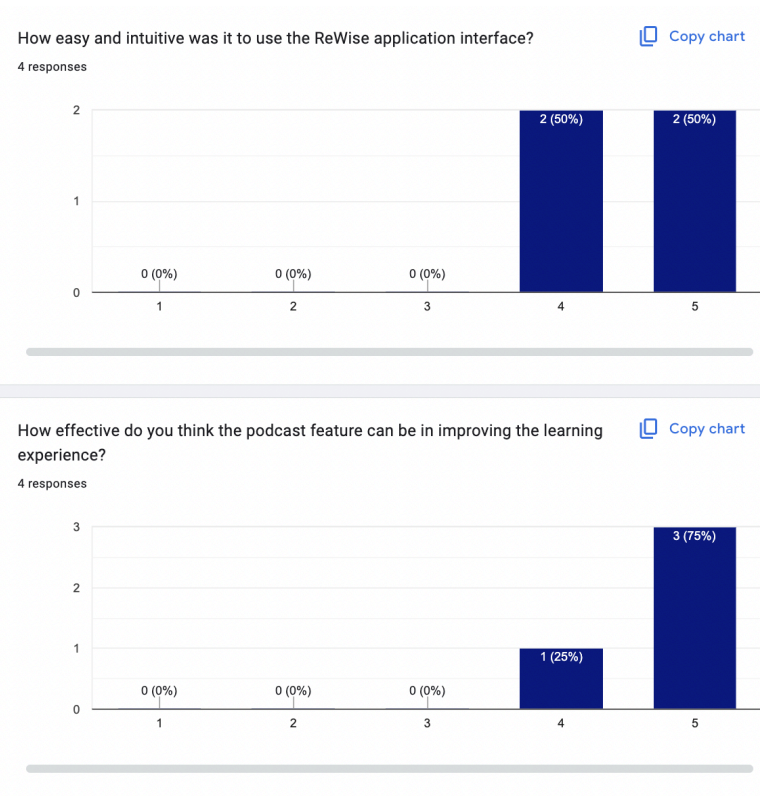
5. Data Analysis

- a. Results of Custom Questionnaire in the form of Excel Sheet:

https://docs.google.com/spreadsheets/d/18UH44WmMMs0rdEw-l9qrK_bPMX4ZnKnQALyFemwSGE0/edit?usp=sharing

Demographic graphs:





b. NASA TLX questionnaire analysis:

Mentally demanding: The overall analysis was that the tasks/ usage of the application were not mentally demanding for the users.

Physically demanding: The overall analysis was that the tasks/ usage of the application were not physically demanding for the users.

Temporal Demand: Most users did not feel hurried or rushed while performing tasks.

Performance: The interviewees were able to accomplish most of their tasks.

Effort: according to the analysis, the users often didn't have to work too hard to accomplish their desired level of performance.

Frustration: While using the application, the level of frustration felt by the users was generally on the lower end.

c. Observation study:

- i. **Mis-click:** Most of the users mis-clicked the icons, as they were very close to one another in the UI. It was mentioned by User B and U.
- ii. **Representation of Icons:** Because of so many icons on the files, users were getting confused about which one to click to access a certain feature. After navigating through a few times, the users were able to learn the usability.
It was mentioned by Users J, B, and A

d. Interview Analysis:

Most of the users found it easy to navigate through the website and commented that it kept them pretty engaged. Every user appreciated the feature of the podcast and said that it was the thing that stood out the most to them. All of them were excited and were looking forward to using this feature. The functionalities of the application were pretty clear to the users. While using the application, most of the users did not make any considerable errors. A lot of suggestions were given to us which could help us improve the website. User J suggested that the icons could be more self-explanatory and/or labeled to improve visibility. User B recommended introducing an introductory wizard that could provide new users with a walkthrough of the website to help them familiarize themselves. User U said that the icons on the PDFs could be more well-spaced to prevent accidental human errors. User A suggested integrating AI in such a way that it also gives its recommendations to the users.

e. **6 Final Questions:**

i) Is the UX/UI appealing to you?

Most of the interview users found the UX/UI of the application quite appealing. Though, there were some comments made on the display aka the interface being “too white” (said by User J). There was also a collective agreement among the users about the interface being quite eye-pleasing with the colors used.

ii) Does the platform keep the users engaged and interested?

According to the users, the platform did a great job of keeping the users engaged and interested. The features of the application were highly liked by the users though there were comments made on how the application and its experience can be a bit confusing for novice users (as said by user B)

iii) Are the users able to provide feedback and report errors as and when required?

Each user agreed that they were able to provide feedback and report errors as and when required. They said that the icon on the bottom left of the webpage made it quite easy for them to report errors.

iv) How easily were you able to navigate through the interface?

The users found it relatively easy and intuitive to navigate through the interface since it gave them a “familiar” feeling of other apps/sites they had used before (said by users U and B).

v) Do users make errors? (If yes, which ones? Why did they make errors?)

Two of the users did make errors. According to user U, the icons are small, and closely placed which can cause users to mis-click sometimes causing unintended functions. user B said that the descriptors on the very initial home/dashboard page were mistaken as buttons when he first used the application. Otherwise, for the rest of the users, there were no errors as such made.

vi) Were the functionalities of our application clear enough for you to understand our ultimate goals?

Overall, the functionalities of the application were pretty clear enough for the users to understand the ultimate goal which was to provide users with efficient learning methods and something that makes learning fun and engaging for them.

Though two users (users J and A) found themselves forgetting the significance of the icons used but said that over time and with constant usage of the application, this problem is solvable and not something too frustrating.

The results of Q5 (c-e) were concluded based on audio recordings and the given informal analysis.

Informal analysis of the Interview Link:

https://docs.google.com/document/d/1hbguCPEfqx_DgPlqTCIEJ8VPGUcm8E6-wxtf3mQngWM/edit?usp=sharing