

Heuristic Evaluation

Structure of the individual report

Part I: Your Name

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Part II: Project Description

I evaluated the project named StudyMate, an application designed to assist high school students with their studies at home. The application introduces a virtual friend (assistant) that helps students enhance their focus during study, understand concepts through explanations, test their knowledge, and improve their study methods. My evaluation focused on the prototype designed for smartphones.

Part III: Evaluation Execution

The evaluation was conducted in classroom 2I at Polito during lab hours. A member of the 2POR team acted as the computer, and another team member as the facilitator, providing me with a paper prototype of their smartphone modality, with the three tasks (simple, moderate, and complex) and the project solution. I navigated through various pages to perform the tasks and evaluated the prototype using the list of heuristic evaluation principles and took notes during the process, identifying several usability violations. The information provided by the team was sufficient for evaluation.

Part IV: List of Violations

1. H1: Visibility of system status

Where: Home page > Start session > click + > Select “ask me something”

What: There is no real-time indication of how many questions are remaining, the percentage of completion, or the current question number.

Why: Users are not aware of remaining questions, which can lead to confusion or frustration, as they do not know how much is left to complete or where they currently stand.

Severity: 3

2. H1: Visibility of system status

Where: Testing pages

What: There is no time duration shown for each question.

Why: Users are unaware of how much time they have spent on each question, which can affect their speed and awareness of performance

Severity: 3

3. H1: Visibility of system status

Where: "Time for Break" page > select an option (snack or offline pause)

What: There is no timer displayed for each break option, and users may stay on break indefinitely without knowing how much time has passed.

Why: Without a visible countdown or time remaining, users may lose track of their break time, leading to inefficient use of time.

Severity: 3

4. H2: Match between system and the real world

Where: The play icon on the main page for navigating to the break page.

What: The app uses the play icon without text label, which may confuse users about its purpose, especially for navigating to the break page.

Why: Using a more intuitive icon would make the action clearer and more easily understood by the user.

Severity: 3

5. H3: User control and freedom

Where: during test > in question pages

What: No "cancel" or "back" button exists for users to exit or go back to the previous page.

Why: Users may feel trapped in a task, reducing their overall control over the interaction.

Severity: 3

6. H4: Consistency and standards

Where: In the navigation buttons across suggestions pages and break time pages

What: Using different icons to navigate to the main page

Why: Using a consistent icon navigating to the main page across all pages would make it easier for users to understand and interact with the app, reducing confusion and enhancing usability.

Severity: 3

7. H4: Consistency and standards

Where: Across pages

What: The interface uses different labels and symbols for navigation, with inconsistent terminology used for similar actions.

Why: This lack of uniformity can lead to confusion, especially for users who rely on predictable navigation cues.

Severity: 1

8. H5: Error prevention

Where: On the settings page

What: Changes made to preferences do not show a confirmation or apply instantly.

Why: Users may be unsure if their settings have been saved

Severity: 2

9. H5: Error prevention

Where: During the test, when selecting an answer for a multiple-choice question.

What: The app immediately shows the answer after the user selects an option, preventing them from changing their answer. Users should only see the correct answer after clicking the check icon.

Why: Allowing users to change their answers before submitting helps prevent errors and gives them control over their choices.

Severity: 3

10. H6: Recognition rather than recall

Where: Quiz report page> Select question

What: Users must remember the specific session and quiz while reviewing questions.

Why: Providing a visual representation of the session and quiz context would help users easily recognize the questions they need to review, and enhance navigation.

Severity: 2

11. H7: Flexibility and efficiency of use

Where: Throughout the application, especially during reviewing sessions and quizzes.

What: The app lacks a home button or an easily accessible option to exit.

Why: Adding a home button or quick exit option would allow users to leave the current session and return to the main screen more efficiently, speeding up navigation.

Severity: 2

12. H8: Aesthetic and minimalist design

Where: My session page

What: The session page uses three dots for delete and rename actions, and an arrow for showing detail.

Why: Replacing the three dots with icons for delete and rename, and using "Show" instead of an arrow, would simplify the interface and make the actions more intuitive.

Severity: 2

13. H9: Help users recognize, diagnose, and recover from errors

Where: During the quiz submission

What: If a user attempts to submit the quiz with unanswered questions, there is no error message or prompt to warn them.

Why: Users may unknowingly submit the quiz without completing all questions. A clear error message would help users recognize and correct the issue before submission.

Severity: 3

14. H10: Help and documentation

Where: Whole application

What: The application does not provide any guidance for first-time users or explain how to effectively use the app.

Why: First-time users may be unsure how the application works, leading to confusion or underuse of the app's capabilities.

Severity: 3

15. HN: Non-heuristic issue

Where: During the session or quiz.

What: There is no option to save progress or resume later.

Why: Users may want to pause a session or quiz and return to it later without losing their progress. Adding a save and resume button would provide flexibility and improve the overall user experience.

Severity: 2

Part V: Summary and Recommendations

Report in the table below the total number of identified violations.

Heuristic	# violations
H1: Visibility of system status	3
H2: Match between system and the real world	1
H3: User control and freedom	1
H4: Consistency and standards	2
H5: Error prevention	2
H6: Recognition rather than recall	1
H7: Flexibility and efficiency of use	1
H8: Aesthetic and minimalist design	1
H9: Help users recognize, diagnose, and recover from errors	1
H10: Help and documentation	1
HN: Non-heuristic issue	1

General impressions and recommendations:

The StudyMate prototype presents a concept for supporting high school students in their learning journey with the virtual assistant, which serves as a "study mate." It aims to enhance concentration, provide explanations, test knowledge, and offer personalized learning suggestions. The interface is relatively simple and functional, with a clear focus on key tasks like explaining topics, testing knowledge, and improving study methods. However, several usability issues emerged during the evaluation, particularly around navigation consistency, error prevention, and user control.

Although the app's core functionality works well, there are areas where the user experience could be greatly improved. For instance, the inconsistent use of icons for navigation can confuse users,

particularly those unfamiliar with the app. Additionally, providing real-time progress indicators during quizzes and explanations would help users feel more in control of their session. Overall, StudyMate has a good foundation but would benefit from refining its usability and consistency.

To improve the interface, I recommend standardizing navigation elements across the app. Using consistent icons and clear labels for similar actions would help users navigate. Additionally, providing visible progress indicators, such as timers for breaks or question completion percentages, would enhance system transparency and keep users informed. Lastly, adding brief instructions for first-time users would ease the learning curve and ensure that all features are used effectively.