

# Heuristic Evaluation

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## Part I: Your Name

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## Part II: Project Description

Web-Application platform that helps learning and exercising the Italian Sign Language. It uses a camera-based operation to learn and practice several features within the sign language realm, it also has a feature to practice Exercises with fellow people on the application. The AI is implemented through the ability of the application to correctly and accurately know the sign language performed through the camera.

## Part III: Evaluation Execution

The heuristic evaluation was conducted between several intervals, it started through an in-person evaluation in the laboratory slot and then was conducted later in online version with other team members. The README contains the most necessary information however at the same time it does contain some information that could be avoided: like the age range of the people who are willing to use the application.

Some joint ambiguity in the README were signalized when it comes to the necessity where it is not well understandable how the application facilitates the rapidity and efficiency of learning a sign word or alphabet.

In the Limitation part, It would have been preferred to have this part as sequential bullet points with indicated pages that provide the limitations rather than a big chunk of text that is hard to find the information for.

Since the prototype is made of images, my first impression of the system was that it is an image-based application learning process, and this was not CLEARLY mentioned in the README but after finding the buttons 'pause/play' I did understand that the learning process is done through video and not static learning.

## Part IV: List of Violations

### 1. H5: Error Prevention

**Where:** All "Learn a new sign" Categories: Word, Topic, and Alphabet.

**What:** When clicking on any of the other icons: Exercise or Conversate, it does not display to me the consequences it might result of losing this home page.

**Why:** I do not know the full status of the action I am currently performing and thus, a scenario that I would not expect could happen.

**Severity:** 3.

2. **H6:** Recognition rather than recall

**Where:** "Try to sign" in the Alphabet category.

**What:** When clicking on "Go to avatar", it goes back to the first letter A.

**Why:** As a user, I must remember each time the letter that I have got into, and I do not get the chance to continue with the letter that I have lastly performed.

**Severity:** 0.

3. **H4:** Consistency and standards.

**Where:** "Try to sign alphabet" interface.

**What:** when click on the arrow "<" in all other scenarios (in different pages) it goes back to the previous page that I have left, however in the "Try to sign alphabet" arrow it takes you back to the initial "Learn" page.

**Why:** This creates a minimal ambiguity towards the functionality of this arrow as well as inconsistency to what this button actually does because sometimes it takes you back one page and sometimes it takes you back several pages ago.

**Severity:** 1.

4. **H7:** Flexibility and efficiency use.

**Where:** "Try to sign" pages in all Categories: Word, Topic, and Alphabet.

**What:** It does not give a quick visible button when I achieve things successfully. A simple "Continue" button which is usually a standard is recommended.

**Severity:** 1.

5. **H3:** User control and Freedom.

**Where:** "Try this sign" in all Categories: Word, Topic, and Alphabet.

**What:** When I do a mistake it does not give me the option to continue because what if I don't want to try again?

**Why:** It forces me to retry which limits my freedom as a user.

**Severity:** 1.

6. **H5:** Error Prevention

**Where:** "Try this sign" in all Categories: Word, Topic, and Alphabet.

**What:** When I decide to press the go back arrow "<", I do not get a pop-up window that makes sure I want to perform this action this should be a major thing because a "Try this sign", although it is present in the Learning part, is an Exercise feature!

**Why:** Users do not know the consequences of this action and there is no actual undo to performing the task.

**Severity:** 4.

7. **H4:** Consistency and Standards.

**Where:** "Learn a Topic interface" Color Category -> Orange.

**What:** The photo does not associate with the actual sign language that I am executing.

**Why:** Orange is put inside the color Category however the photo displays are the actual fruit which leaves an inconsistency in the flow of the objective.

**Severity: 1.**

8. **H4: Consistency and Standards.**

**Where:** In the “Learn a Topic” Category after Clicking on the Orange it displays an interface where the user is not in front of the camera.

**What:** When I click on the go back arrow button, it takes me into the “Learn a Word” Interface and NOT “Learn a topic interface.”

**Why:** Clearly it does not operate as I wanted to and there is no consistency with the work.

**Severity: 4.**

9. **H4: Consistency and Standards.**

**Where:** “Learn a Topic” Category after clicking on orange vs “Learn a word” Category after clicking on Orange.

**What:** In the “Learn a Topic”, the “Orange” interface displays the progress you make in terms of words. However, this is not actually available when you want to see the progress you made when you are in the “Learn a word” interface.

**Why:** It would be better if there is some consistency in the work performed.

**Severity: 1.**

10. **H8: Aesthetic and minimalist design**

**Where:** “Learn a Topic” Category.

**What:** In each category the things are not put into alphabetical order, some mistakes like forgetting “Sunday” in the days of the week and calling the word “Region” instead of “Continents”.

**Why:** Keeps consistency through the work because in the “Learn a word” section it is done in alphabetical order.

**Severity: 0.**

11. **H5: Error Prevention**

**Where:** Exercise Section – Finger spell the word.

**What:** When I go into check the alphabet interface and I want to continue my exercise. I must start from the beginning; it doesn’t let me know that I will lose my progress if I go back to the spelling page.

**Why:** When the user performs an action, he does not clearly know the outcome of this action which leaves us in ambiguity.

**Severity: 3.**

12. **H3: User Control and Freedom**

**Where:** Exercise Section – Guess the sign, Sign the word, All types together.

**What:** When doing an exercise session, it does give the possibility to skip a word. However, it does not give me the possibility to go back to this word and use it once again.

**Why:** It just a forwarding exercise session with limited access to the user.

**Severity: 3.**

13. **H4: Consistency and Standards.**

**Where:** Exercise Section – All categories.

**What:** When I perform an Exercise and I decide to skip a certain part of it, the points bar on the top including my name gets updated anyway with the points associated to it.

**Why:** It is not consistent with the action I have just performed which is skipping the values.

**Severity:**4.

14. **H1:** Visibility of system status.

**Where:** Exercise Section – All categories.

**What:** If I skip the whole exercise session it still gives me an additional of 10 XP.

**Why:** The user gets an unexpected outcome to the action that he has just performed.

**Severity:** 2.

15. **H10:** Help and Documentation.

**Where:** Exercise Section – All Categories.

**What:** The pop-up window for the camera usage is good, however it should be displayed when the user clicks on the PLAY button and not when he enters a certain category.

**Why:** Inconsistency with the Learn Section when clicking on “Try to sign” the message is displayed.

**Severity:** 2.

16. **H4:** Consistency and Standard:

**Where:** Conversate Section Any Call interface.

**What:** When resize the screen of the person, and then I decide to enable the translation, I go back to the initial size without considering the resizing I did.

**Why:** It is not consistent with a previous action I have made Which is resizing the values.

**Severity:** 2.

17. **H1:** Visibility of the system status.

**Where:** Conversate with Elena.

**What:** When I decide to “Enable translation”, the translation should be displayed to what she is saying to me, I should not see the translation to what I am saying to her, I assume I am the identified user with the above “You” Frame.

**Why:** The action does not display what I intend to do, and it needs moderation.

**Severity:** 4.

## Part V: Summary and Recommendations

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

Heuristic	# violations
<b>H1:</b> Visibility of system status	3

<b>H2:</b> Match between system and the real world	0
<b>H3:</b> User control and freedom	2
<b>H4:</b> Consistency and standards	6
<b>H5:</b> Error prevention	3
<b>H6:</b> Recognition rather than recall	1
<b>H7:</b> Flexibility and efficiency of use	1
<b>H8:</b> Aesthetic and minimalist design	1
<b>H9:</b> Help users recognize, diagnose, and recover from errors	0
<b>H10:</b> Help and documentation	1
<b>HN:</b> Non-heuristic issue	0

## Recommendations:

After a thorough examination of the provided mid-fidelity prototype, it is important, in my opinion, to showcase the great and devoted work the “exerLIS” project team has shown whether it’s by displaying the Images that accompany their learning section or their exercise section. The interfaces are well displayed, symmetrically plausible and generally neat, they have done an astonishing work on their graphical user interface.

I do recommend however to work more on a better freedom or emergency exit scenarios because, in my humble opinion, not all the scenarios are covered within the mid-fi prototype, but I do understand that it might probably related to the limitations Figma holds.

I do also recommend emphasizing more on coherency between the pages since not all the features are equally well presented and not all the buttons are well seen or have known functionalities.