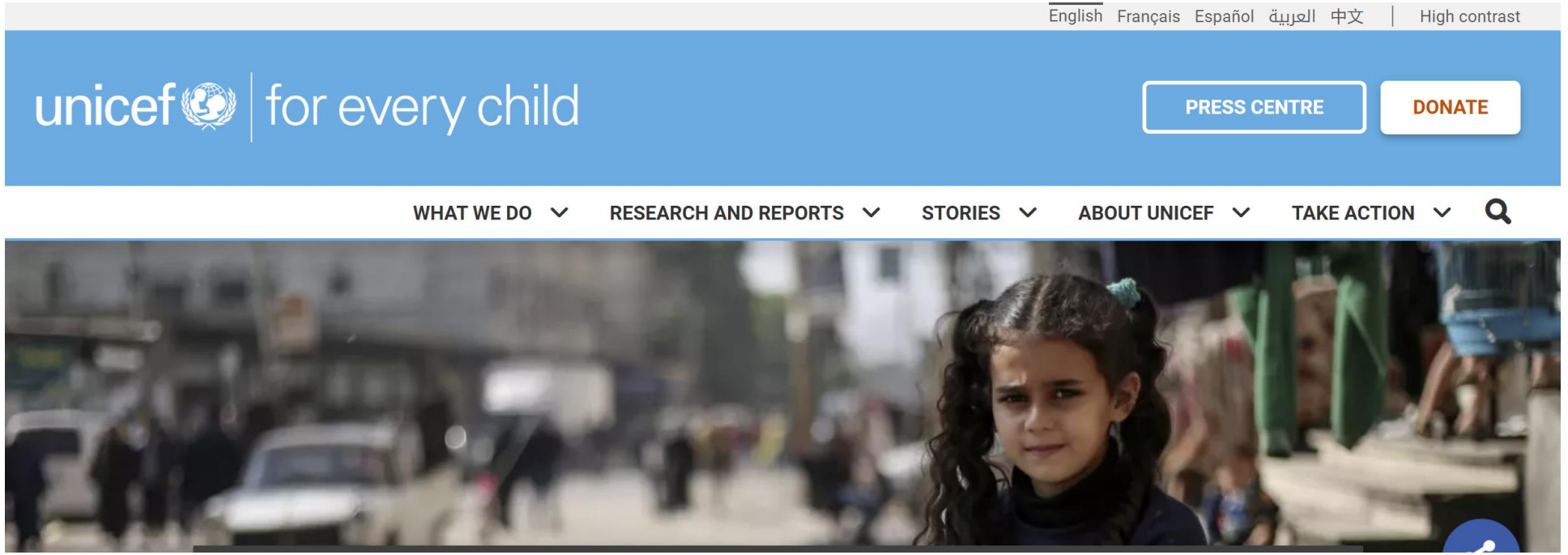
HYP 2023-2024
Project 1: Usability Evaluation

Delivery in itinere: **April 14, 2024**

Delivery in June and July 2024**: on official exam dates**

USABILITY Project: What to evaluate for the FIRST exam session (in itinere or June-July)

https://www.unicef.org/



(*) Methods explained in the next lessons

Usability Project

3 ACTIVITIES

- ISPECTION
- USER-TESTING
- REPORTING

Inspection

WHICH HEURISTICS WILL YOU USE IN YOUR PROJECT?

You must use

- Nielsen’s Heuristics **AND**
- The subset of MiLe Heuristics reported in the next slides

You can included additional heuristics you may find in the literature (in this case, please mention the source in your documentatio) but this is NOT mandatory

Nielsen's 10 heuristics (see slides 1.2 1.2-USABILITY Evaluation-INSPECTION methods-2022-23)

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose and recover from errors
10. Help and documentation

Please notice that some of them might not be relevant for the web site you inspect in your project

Mile Heuristics

See also slides 1.2 1.2-USABILITY Evaluation-INSPECTION methods-2022-23

MILE USABILITY HEURISTICS

CONTENT

- **Information overload**: is the information in a page too much/too little?
- **Consistency of Page Content Structure:** do pages of that present topics of the same category have the same types of elements?
- **Contextualized Information:** does the page include information that helps users understand where they are?
- **Content organization (hierarchy)**: is the hierarchical organization of topics appropriate for the topic relevance?

MILE USABILITY HEURISTICS

NAVIGATION/INTERACTION

- **Interaction consistency**: do pages of the same type have the same **navigation links** and **interaction** capability?
- **Group navigation-1**: is it easy to navigate from, among groups of "items", and within the items? E.g.
  - From the **"list of items"** of a group to its "members" (and the other way around); **among different** "groups"; among **members of the same group (next/previous)**
- **Group navigation-2:** does menus create Cognitive Overload?
- **Structural Navigation**: is it easy to navigate among the "components" ("parts") of a topic?
- **Semantic Navigation**: is it easy to navigate from a topic to a related one (in both directions)?
- **"Landmarks"**: are "landmarks" effective for the user to reach the "key" (most relevant) parts of the web site?

Landmark= links available on ALL pages (or ALL pages of a given macro-area of the web site) ex. HOME

MILE USABILITY HEURISTICS

PRESENTATION

- **Text lay out**: is the text readable? Is font size appropriate?
- **Interaction placeholders-semiotics**: are interactive elements “intuitive”? i.e., do textual and visual labels/icons for interactive elements **convey their functional meaning?**
- **Interaction placeholders-consistency**: are textual or visual labels of interactive elements **consistent** in terms of wording, shape, color, position, etc.?
- **Consistency of Visual Elements:** in pages of the same type do visual elements have the same visual properties?
- **Hierarchy-1**: is the on-screen allocation of **contents** within a page appropriate for their **relevance**? (e.g., do the difference in position reflects the *difference in importance* of the content elements)
- **Hierarchy-2**: is the on-screen allocation of visual elements appropriate for their **relevance**? (e.g., do the difference in position reflects the *difference in importance* of the elements)
- **Spatial allocation-1**: Are “semantically related” elements close to each other?
- **Spatial allocation-2**: Are “semantically distant” element placed distant from each other?
- **Consistency of Page Spatial Structure:** do pages of the same type have the same **spatial organization** for the various visual elements?

Inspection: Steps

1. Define the heuristics you want to use (group work)
2. Define the metrics: the values you use for measurement and how to assign scores (group work)
3. Prepare an **inspection sheet** that is used by all evaluators, e.g., a table/form with all heuristics (organized by type or design dimension) (group work)
4. Define the general process of the work, e.g., minimum number of pages to inspect, minimum time devoted to inspection (group work)
5. Perform the inspection (individual work)
6. Discuss the results among all inspectors, to reach a shared agreement on comments and scores: agreed scores are **NOT NECESSARILY THE AVERAGE OF SCORES** (group work)
7. Organize the material of all evaluators and REPORT THE RESULTS (see document structure in the next slides) (group work – but can be done individually)

Important

Do not distribute the work among inspectors - All inspectors should analyse all the main “sections” of the web site

Identify the main user profiles for the chosen web site and define the **main general tasks that are relevant for these profiles:** each inspector will try to perform at least these tasks, which will guide the inspection and make the results more comparable

While exploring the application, score and annotate you comments about the main pages where when you detect violations of some heuristics (by default, no score means no violation)

Heuristic evaluation form – individual evaluators (example-you can change it)

In the evaluation form each inspector can annotate his/her personal evaluation results, e.g., the scores of each heuristic for each page with comments

Evaluator Name:

Page Url	Heuristic CATEGORY	Heuristics	Score	Comment
	C1 (e.g., Navigation)	H1	1,5	textual comment (+ annotated screenshot)
		H2		
	Etc.	Etc.		

N/A: heuristics not applicable
Other scores range from 0 to 5
0 = the heuristic is NOT satisfied; severe violations have been detected
5= the heuristic is FULLY satisfied; no severe violations has been detected

Heuristic evaluation form: final agreed form (example-you can improve it)

The final form is the result of the comments and scores agreed among all evaluators

CATEGORY	Heuristics	Score (agreed among all group members)	Comment (url of pages, short notes and (optional) example screenshots (or references to figures reported in annex)
C1 (e.g., Navigation)	H1	1,5	
	H2		
Etc.	Etc.		

Other scores range from 0 to 5

0 = the heuristic is NOT satisfied; severe violations have been detected

5= the heuristic is FULLY satisfied; no severe violations has been detected

General structure of the Report (mandatory)

Cover (with your names, stud ID, Course Title, project title, CHOSEN WEB SITE)
Abstract (max 500 words – overview of what the document is about)
Table of contents – **WITH PAGE NUMBERS**

PART 1: Inspection

PART 2: User Testing

PART 3: Conclusions

ANNEXES

INCLUDE PAGE NUMBER IN EACH PAGE!

Usability Report: Remember that…

- Your report is for the general manager of the institution (the hypothetical “client” who pays for this work) AND the design manager
  - They both want to have a clear idea of problems and their severity, with proper examples
- Your report is intended to be used as **input** for a **re-design** activity
  - Try to propose re-design solutions

- *Indicative* length of the report **(without annexes)**, font Times New Roman 11) including images, diagrams, graphs, tables: **15-20 pages**

Part 1: Inspection

Key information to be included:

- Few lines about the general method and the steps followed
- Heuristics (report the definitions in the previous slides)
- Metrics agreed among all evaluators
- **Final scores agreed among all evaluators (**include the main comments for your scores and **examples of commented screenshots** to support your scores)
- Annex: Report the scores and main comments of **EACH evaluator**
- **PROVIDE AGGREGATED DATA, e.g., MEAN VALUES FOR ALL EURISTICS, (MEAN) SCORE BY DIMENSIONS** (e.g., for CONTENT HEURISTICS, NAVIGATION HEURISTICS, ect.)
- PROVIDE **VISUAL** REPRESENTATIONS OF RESULTS (diagrams, summary tables...)
- Include a short conclusion section where you breifly **discuss inspection results**

Part 1: Inspection

Key information to be included:

- Few lines about the general method and the steps followed
- Heuristics (report the definitions in the previous slides)
- Metrics agreed among all evaluators
- **Final scores agreed among all evaluators (**include the main comments for your scores and **examples of commented screenshots** to support your scores)
- Annex: Report the scores and main comments of **EACH evaluator**
- **PROVIDE AGGREGATED DATA, e.g., MEAN VALUES FOR ALL EURISTICS, (MEAN) SCORE BY DIMENSIONS** (e.g., for CONTENT HEURISTICS, NAVIGATION HEURISTICS, ect.)
- PROVIDE **VISUAL** REPRESENTATIONS OF RESULTS (diagrams, summary tables...)
- Include a short conclusion section where you breifly **discuss inspection results**

Part 1: Inspection
General structure of the document

General method (what is inspection based usability evaluation; specific heuristics and metrics used)

Execution of the study

How the study was performed

Results

- Agreed scores (with comments); Aggregates scores (with visualizations)

Discussion of results

Your observations on results; priority of problems detected

Part 2: User testing

- Follow the steps described in course slides “user testing”
- ASAP: define and find an agreement among evaluators about:
  - The MAIN User profile(s) to consider
  - Tasks for each profile
  - Data Gathering and Analysis methods
  - How to recruit users
- How many users: It depends on the group size
  - **each group members: min 5 users**

Part 2: User Testing
General structure of the document

General method (what is UT)

Design of the study

Execution of the study

How the study was performed

Results

- Agreed scores (with comments); Aggregates scores (with visualizations)

Discussion of results

Your observations on results

Part 3

- Comparison of the results achieved using the 2 methods
- Problems priority and Suggestions for redesign
- (Optional: Personal observations on the whole work performed: what did you learn?)

Annex

Annex 1: Inspection

Individual inspectors commented scores (MANDATORY) + any relevant information

Annex 2 (optional): User Testing

Any additional relevant information about user testing

USABILITY EVALUATION: group vs individual work

INSPECTION: A **group work** (min. 2 people)

- If you do not have a project group, **please join another group** (or find another person) at least to perform **step 1-6**;
- then you can report Part 1 autonomously, acknowledging the contribution of the others, and include it in the final individual report (not encouraged)

USER TESTING:

- Group work: **must be the same group that performed inspection** (unless an extra person has been included just for the purpose of steps 1-6); the same group will then continue with the technology project
- For students who do not have a group, user testing can be an entirely individual work (not encouraged)

Examples from past years evaluation reports

Examples of reports will be posted soon in WeBeep

IMPORTANT

- You must NOT take these examples as “the bible” (none of them is 100% perfect): please use them as inspiration only

- The general structure of the evaluation report must be followed, but there are many ways to describe each section, particularly the execution process followed and its results. Find your own way to write the specific contents