

Usability Evaluation

Second evaluation activity

For the usability evaluation activity, our team chose a Heuristic Evaluation following Jakob Nielsen's 10 Usability Heuristics for User Interface Design. This method was chosen because it complements the earlier usability testing by focusing on interface quality, visual simplicity and interaction logic. This evaluation aims to identify how well the interface design supports different tasks through consistency and minimal cognitive load.

The computer prototype simulates 'Luma's' interface on a screen with a remote based interaction mimicking a TV-style setup. The left side of the screen displays system prompts, while the right side shows the remote layout, allowing evaluators to visualize and simulate input behavior. The mirror itself would function as a two-sided reflective display, controlled by a remote.

Evaluation setup

- Evaluators: 3 independent reviewers familiar with smart devices.
- Materials: Access to the computer prototype, user manual and evaluation form.
- Procedure: Each evaluator independently inspects 'Luma's' interface and rates it according to the selected severity scale.
- Output: Individual heuristic ratings and qualitative comments will be compiled to summarize issues and design recommendations.

Heuristics to be evaluated

Heuristic	Evaluation criteria	What to look for
1. Visibility of system status	The mirror should provide clear feedback when remote inputs are made	Does the system indicate when a button press is registered?
2. Match between system and the real world	The mirror should use familiar interaction patterns	Do users intuitively understand commands as they would on a TV?
3. User control and freedom	Users should easily undo or exit actions	Can users return from settings without confusion?
4. Consistency and standards	Controls should behave predictably across contexts	Is brightness adjusted the same way as volume? Are button functions consistent?

5. Aesthetic and minimalist design	Information should remain subtle and non intrusive	Does the interface maintain calmness and avoid overwhelming the user visually?
6. Recognition rather than recall	Users should not have to remember command sequences	Are on screen prompts or icons sufficient to guide remote actions?

Severity scale:

Evaluators will rate each Heuristic on a 1-5 severity scale

- 1 = No usability problem
- 2 = Visual issue only (not visually appealing)
- 3 = Minor usability issue
- 4 = Major usability issue (important to fix)
- 5 = critical usability issue (must fix before continuing)

Each evaluator will provide short written comments describing any issues and potential improvements.

Expected outcomes:

The heuristic evaluation will help identify whether ‘Luma’s’ interface adheres to core usability principles, particularly consistency and non intrusiveness. We will use these results which will guide design refinements in the next iteration, ensuring that users can interact with the mirror intuitively and without unnecessary cognitive load.