***Overview***

**Description**

A usability evaluation method in which one or more reviewers, preferably experts, compare a

software, documentation, or hardware product to a list of design principles (commonly referred

to as heuristics) and identify where the product follows and does not follow those principles.

**Required Skills**

* We recommend that someone experienced with the method lead a heuristic evaluation.
* With training, non-experts are able to identify usability problems.
* A domain expert is needed to assess technical applications or products.

**Recommended Uses**

Heuristic evaluations can be used as part of:

* Requirements gathering (to evaluate the usability of the current/early versions of the
* interface)
* Competitive analysis (to evaluate your competitors to find their strengths and
* weaknesses)
* Prototyping (to evaluate versions of the interface as the design evolves)

**Outcomes**

* List of heuristic violations that represent potential usability issues.
* List of user interface components that adhere to heuristics that represent areas with good usability.

**Limitations**

* Does not include interaction with intended users of the product or application and thus may identify issues that are not pertinent to the intended user and may miss issues that impact end user performance.
* Not a substitute for a usability test, as the two methods often uncover different types of usability issues.

***Method***

**Description**

To conduct an heuristic evaluation, a small group of evaluators walk through a set of tasks or scenarios with the user interface to identify violations of usability principles, or ‘heuristics’. Researchers and usability practitioners have developed sets of heuristics that focus on different user interaction goals. These principles should be considered guidelines or ‘rules of thumb’ for designing the user interface, not standards or requirements.

**Procedure (How-to)**

Choose the best heuristics for your product

* Consider the type and intent of the product interface and compare interface information to available heuristic lists
* For instance, [Jakob Neilson has published general interaction design principles for good usability](https://www.nngroup.com/articles/ten-usability-heuristics/), whereas Gerhardt-Powals has published cognitive engineering principles for enhancing information processing and human-computer performance
* There is much overlap between these sets of principles, but we recommend using the [General Design Principles for EHRs](https://sbmi.uth.edu/nccd/ehrusability/design/guidelines/Principles/index.htm) to evaluate health IT applications

Describing intended user interactions

* Separate interactions into steps (e.g., Task Analysis) or another categorization method
* User interface criteria (i.e., steps or interface categories) should be identical across evaluators
* Identify evaluator perspective (e.g., user persona, usability expert, first-time user)

Evaluate interface and compile findings

* Each evaluator assesses interface components (or categories, or steps) based on the heuristic list chosen previously
* Evaluators will assign a severity rating for all violations
* If compiling findings as a group, evaluators meet to walk through the interface and describe issues that were uncovered
* If the Heuristic Evaluation lead is compiling findings on their own, then the lead reviews all of the findings and meets individually with HE evaluators to ensure there is clarity
* The group or Heuristic Evaluation lead must come to consensus on the quantity and severity of issues, the heuristics violated, and design recommendations

Deliverables

Below are example products and reports for a heuristic evaluation

* *Insert link to example*
* *Insert link to example*