**Page ID**: **#.# Cognitive Walkthrough**

# Primary Content

**Title**

Enter the **Title** of the **Method** here (REQUIRED).

**Cognitive Walkthrough**

**Description -- i.e., What it is:**

Enter the **Description** here (REQUIRED).

A method for evaluating user interfaces by analyzing the cognitive process required by the user. Cognitive walkthrough (CW) was developed to bring cognitive theory closer to the practical design, development, and evaluation of user interfaces (Wharton et al., 1992).

Unlike other usability evaluation methods, such as heuristic evaluation, CW is a task-based method that focuses on:

* Understanding a system’s learnability for new or infrequent users without prior knowledge or training.
* Assessing the extent to which the system or interface is designed to support cognitive processing and decision-making of the end users performing complex tasks.

CW is particularly effective for evaluating walk-up-and-use systems like websites or kiosks where users would have little or no training.

CW can be conducted by a single evaluator or a group of evaluators. The evaluator(s) choose a specific task from the pool of tasks that the system or interface is intended to support, and determines whether the user’s background knowledge, together with cues from the interface, will lead to a correct sequence of actions in achieving the task goal and actions.

The evaluation is structured around four questions asked of every step in the task:

1. Will the participant adopt the expected goal?
2. Will the participant find controls in the interface appropriate for action toward the goal?
3. Will the participant select the action that seems likely to make progress toward the goal?
4. Will the participant evaluate the system's feedback for evidence that progress is being made toward the goal?

Empirical evidence is still not available to support the claim that CW is better suited to user interface redesigns than heuristic evaluation, but this method does support the consideration of alternative interface approaches that heuristic evaluation does not support well.

**Recommended Uses**

Enter the **Recommended Use** here. If there are no details, insert N/A or TBD.

* To understand the task environment using a pre-existing design solution.
* To identify areas for improvement throughout the iterative design cycle.

**Limitations**

Enter the **Limitations** here. If there are no details, insert N/A or TBD.

* The value of the data is limited by the skills of the evaluators.
* Approach tends to yield a relatively superficial and narrow analysis that focuses on the words and graphics used on the screens.
* The method does not provide an estimate on the frequency or severity of identified problems.
* Relative to user testing, the method is associated with a greater tendency to report known concerns and issues that do not impact usability in actual use environments.
* Following the method exactly as outlined in the research is labor intensive.
* Groups of evaluators are needed to derive quality outcomes.

**Outcomes**

Enter the **Outcomes** here. If there are no details, insert N/A or TBD.

* A list of success stories, failure stories, design suggestions, and problems that were not the direct output of the walkthrough.
* A report on the design implications of each failure story with recommended user interface improvements, particularly on how to improve learnability of the system.

**Required Skills and Expertise**

Enter the **Required Skills** **and Expertise** here. If there are no details, insert N/A or TBD.

* Method is usually carried out by human factors engineers or cognitive psychologists.

**How to Proceed**

If there are no details, insert TBD.

* **How-To Guide.** Review step-by-step instructions on how to conduct a [insert method] and access tools and instruments to support your evaluation.
* **Schedule a Consult.** Connect with a usability specialist for support on your project.

[BEGIN: How to Do It]

**Introduction**

Enter the **Introduction** here (REQUIRED).

A cognitive walkthrough is an evaluation done by a usability or human factors expert where they interact with a system or tool as if they were a typical end user. The focus of a cognitive walkthrough should be on the learnability of the system or tool for a new or infrequent user (cite). A cognitive walkthrough is useful for identifying potential issues with a design when you don’t have easy access to users or you want to address issues before the design is presented to users.

**Procedure**

Enter the **Steps** here. (Required).

The Usability Body of Knowledge outlines the following steps for a cognitive walkthrough:

* Define the users of the product (it is also recommended to conduct a context of use analysis).
* Determine what tasks are appropriate for the walkthrough.
  + You want to make sure you have specific tasks outlined for the walkthrough.
* Determine who the evaluator is or assemble a group of evaluators
* Develop any ground rules for the evaluation (what should evaluators avoid discussing during the walkthrough?)
* Conduct the walkthrough
  + Provide a representation of interface to evaluators
  + Have them work through the task flows while pretending to be a typical user.
  + Develop user stories for each step in the task flow
  + Keep track of whether evaluators were able to complete tasks, why they failed tasks, design suggestions, any problems with the interface, etc.
* Have analysts come together and discuss strengths and weaknesses of the tool or product
* Develop solutions based on feedback

**Tools**

If there are no details, insert N/A or TBD.

* A representation of the interface
* A persona that represents the typical user
* A list of tasks for the walkthrough
* Note taking materials

[END: How to Do It]

**Author**

Enter the **REFERENCES** here. If there are no details, insert N/A or TBD.

* Human Factors Engineering (HFE), Office of Health Informatics, Veterans Health Administration

**Sources**

Enter the **REFERENCES** here. If there are no details, insert N/A or TBD.

* Blandford, A., Bevan, N., Wilson, C., Werner, B., & Mascari, M. (2011). Cognitive Walkthrough. In Usability Body of Knowledge. Retrieved April 29, 2020, from [**http://www.usabilitybok.org/cognitive-walkthrough**](about:blank)

**References**

Enter the **REFERENCES** here. If there are no details, insert N/A or TBD.

* Wharton, C., Bradford, J., Jeffries, R., & Franzke, M. (1992). Applying cognitive walkthroughs to more complex user interfaces: experiences, issues and recommendations. in Bauersfield, Bennett and Lynch, Eds. CHI’92 Conference Proceedings, 381-388 Addison W. [http://doi.acm.org/10.1145/142750.142864](about:blank)