# Unmoderated Usability Review

A usability evaluation method based on the [Heuristic Evaluation](https://vaww.portal2.va.gov/sites/humanfactors/HFBoK/SitePages/Heuristic%20Evaluation.aspx) but intended for reviewers who are not usability experts, but may have clinical or task-based expertise.  Several reviewers compare a software, documentation, or hardware product to a list of design principles (commonly referred to as heuristics) and identify where the product does not follow those principles. Manual or automated forms can be used to gather and consolidate results from multiple reviewers.

The original justifying assumptions about the heuristic evaluation method presented by Nielsen (1989) and Nielsen and Molich (1990) were: the method is relatively inexpensive, evaluators do not have to be usability experts, there would be evaluations by “several” evaluators, and that when results are aggregated, the evaluators will find “most” of the issues identified by more expensive methods. [See the Heuristic Evaluation Method](https://vaww.portal2.va.gov/sites/humanfactors/HFBoK/SitePages/Heuristic%20Evaluation.aspx) for a complete discussion.

This method is intended as a first [grassroots](https://vaww.portal2.va.gov/sites/humanfactors/HFBoK/SitePages/Grassroots%20Usability.aspx) step toward human centered design that can be performed by anyone and provides some of the benefits of engaging human factors professionals. An automated [tool to facilitate unmoderated HEs](https://vaww.portal2.va.gov/sites/humanfactors/unmoderatedUsabilityReviews) was developed by HFE, and is available to support your efforts. Contact Steven Bias for assistance.

## Benefits

* Inexpensive relative to other evaluation methods.
* Intuitive, and easy to motivate potential evaluators to use the method.
* Advanced planning not required (Nielsen & Molich, 1990).
* Can be used early in the development process (Nielsen & Molich, 1990).
* Faster turnaround time than user testing (Kantner & Rosenbaum, 1997).
* Can employ multiple testers from multiple domains, which can improve coverage.

## Limitations

* Not as effective as evaluations that use UX experts.As originally proposed by Nielsen and Molich, the evaluators would have knowledge of usability design principles, but were not usability experts (Nielsen & Molich, 1990). However, Nielsen subsequently showed that usability experts would identify more issues than non-experts, and “double experts” – usability experts who also had expertise with the type of interface (or the domain) being evaluated – identified the most issues (Nielsen, 1992). Such double experts may be hard to come by, especially for small domains.
* Requires a large number of evaluators. Individual evaluators identify a relatively small number of usability issues (Nielsen & Molich, 1990). Multiple evaluators are recommended since a single expert is likely to find only a small percentage of problems. The results from multiple evaluators must be aggregated. (Nielsen & Molich, 1990).
* Probably not as efficient as using professional reviewers. Recruiting 10 doctors who spend 10 minutes learning to do the evaluation, and another 15 minutes evaluating a small portion of a modest sized system is very likely to take more time to complete than having 2 experts review the system. This limitation diminishes somewhat when reviewers have the opportunity to use the method for several evaluations and become familiar with it. This suggests that developing of corp of inexpert but trained evaluators can improve results over time.
* Finds Low-Severity Issues at a Higher Rate. Heuristic evaluation may identify more minor issues and fewer major issues than would be identified in a think-aloud usability test (Jeffries and Desurvire, 1992).
* Evaluators Focus On Their Areas of Concern. Biased by the preconceptions of the evaluators (Nielsen & Molich, 1990).
* Risk of False Positives. Heuristic evaluations may be prone to reporting false alarms – problems that are reported that are not actual usability problems in application (Jeffries, 1994).

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| Study Execution  |  |  | | --- | --- | | **​Milestone** | **​Owner** | | ​Recruit Evaluators | Business Office | | ​Develop Use Case Scenarios and Tasks | ​                                      Business Office | | ​Configure Unmoderated HE Tool | ​                                      HFE (currently) | | ​Conduct usability assessment | Business Office | | ​Analyze findings | HFE or Business Office | | ​Determine responses and resolutions | ​​                           Business Office, Developers | | ​Repeat evaluation as necessary | Business Office |   ​ | ​ |

## Outcomes

* The study produces a screen-by-screen list of comments and findings submitted by end users.
* Associated with each comment/finding will be the submitter's clinical role, the task that was being carried out, and the severity of the finding.

The study will also report general comments about system usability from the reviewers.

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| **Phase of Development​** | |
| ​ | ​Planning, Scoping & Definition |
| ​ | ​Requirements Gathering |
| **✔** | **​Early Design** |
| **​✔** | **​Detailed Design & Development** |
| **​✔** | **​Field Testing** |
| ​ | ​Deployment |
| **​✔** | **​Post-Deployment** |

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| **​Study Characteristics ​** | |
| ​**Timeframe** | 3 Weeks |
| **​Level of Effort** | Moderate |
| ​**Data Collection** | Attitudinal |
| ​**Data Reporting** | Qualitative |

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| **​Related Methods ​** | |
| **Derived from** | Expert Review |
| **​Complimentary Methods** | [**Formative Usability Test**](https://vaww.portal2.va.gov/sites/humanfactors/HFBoK/SitePages/Formative%20Usability%20Test.aspx)  [**Summative Usability Test**](https://vaww.portal2.va.gov/sites/humanfactors/HFBoK/SitePages/Summative%20Usability%20Test.aspx) |
| **​Similar Methods** | [**Participatory Heuristic Evaluation**](https://vaww.portal2.va.gov/sites/humanfactors/HFBoK/SitePages/Participatory%20Heuristic%20Evaluation.aspx) |
| **​Follow-Up** | All |

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