CSC8022 Human-Computer Interaction

Week 2: Heuristic Evaluation

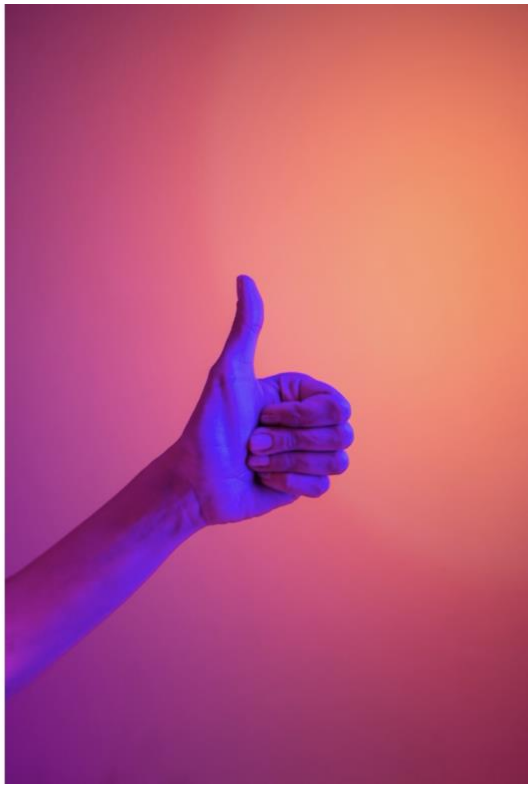
Heuristic evaluation is an **inspection method** where someone inspects a system in a consistent way. It is also known as an **expert appraisal** approach, a way of testing a product or service with a domain expert (someone involved in user research or interaction design) rather than actual users. It is often used to collect feedback on early designs in a short time span and at low cost. It can also be useful to gain specific and consistent feedback on a set of standardised usability principles for existing products or services that are experiencing negative customer feedback. Using their domain knowledge, experts establish whether a designed solution complies with certain usability principles, also referred to as heuristics – rules of thumb.

The advantages of using heuristic evaluation is that it can save time and money, as it can be much quicker and easier to run than a user study with actual users. Experts, familiar with particular design and usability principles, and the process of evaluation can assess the product sometimes offering concrete solutions to some of the issues raised. The feedback gathered is consistently organised and structured and therefore can easily be aggregated and presented back to clients or design teams to show high-level findings.

The disadvantages of using heuristic evaluation is that expert knowledge and understanding will not be the same as the actual users and the results can therefore create false positives. Insights are also heavily dependent on how experienced the evaluator is, so although the measures given are standardised, they are subjective, dependent on expertise level and require the evaluator to keep the specific user in mind.

Expert Appraisal: Heuristic Evaluation

- **3 evaluators** (or thereabouts) for every interface
- A session for an **individual evaluator** lasts one or two hours (but can be longer – might be better to split up sessions for complex interface)
- Evaluator goes through the interface several times and inspects the various interface elements and compares them with a list of **good usability principles** (the heuristics or rules of thumb)
- The evaluator is also allowed to consider any additional usability principles or results that come to mind that may be relevant



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There are several standardised heuristic models, but design teams sometimes come up with new ones in order to specifically evaluate key elements that are unique to a specific service or product. For the exercise this week we will focus on Nielsen's 10 heuristics and conduct an evaluation using these as a guide. You can read more about these heuristics here in this article https://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/ . For a visual version of the heuristics with videos for each principle take a look at this link here https://www.nngroup.com/articles/ten-usability-heuristics/#poster

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TO CONDUCT A HEURISTIC EVALUATION

In our online session we will conduct a heuristic evaluation of a website, online tool or mobile app that supports sustainability behaviours. You will do this in groups. (Please note: if you are unable to attend the session please get in touch with someone on your course to do the activity together in your own time. You will need to conduct a heuristic evaluation yourself and ask at least one other person to complete it too. This activity should take approximately 2 hours to complete - 30 minutes to plan, 40-60 minutes to complete evaluation depending on how many tasks you want an evaluator to complete and a further 30 minutes to consolidate and compare findings from two or more evaluations.)

1. In groups of 2-5 people decide which learning platform you will evaluate.
2. Decide on 2-3 tasks you will all evaluate.
3. In your group write a scenario that helps contextualise how a typical user uses the platform and completes these specific tasks.
4. You will complete the evaluation independently of each other completing the same tasks.
5. To start make sure you are familiar with the task and have completed each task at least once.
6. You will then evaluate each task against each of the heuristics.
7. Fill in the Heuristic Evaluation template to say what the task is, if the heuristic has been violated and specify the severity rating (e.g. **0 = no problems 1 = cosmetic 2 = Minor 3 = major 4 = catastrophe)** and any suggested recommendations where there is a problem if you have a clear idea of what could be done.
8. Add one additional sustainability heuristic (based on your reading) not currently included as part of Nielsen's heuristics.
9. Once completed return to your group to compare and consolidate your findings.
10. What are the most severe violations? Are these consistent across evaluators?
11. Which aspect of the platform is considered most user friendly and works well?
12. You can use your collective results to create a graph or chart to help show how one or more of the tasks were completed across the team and the most severe violations.

WRITING UP YOUR FINDINGS

Your report 2 assessment asks for you to report on a usability evaluation. If reporting on a heuristic evaluation exercise you will need to describe the steps you went through and the key findings from the exercise described here. Your findings should be grounded in evidence provided by what is reported in your heuristic evaluation and one that is conducted with at least one other person from your course. Remember be specific in your examples of what you found using images of the interface and where usability problems were experienced and how. In your conclusion you will also need to reflect on the advantages and limits of the approach and your evaluation.