

Covid Won't Stop Us Optimizing Heuristic Evaluation

Adam Steele
DePaul University



Introduction



Research done with PhD student Anas Abulfaraj

- Two papers accepted at HCI International 2020
- Currently undertaking validation of the CoHE framework



Heuristic Evaluation

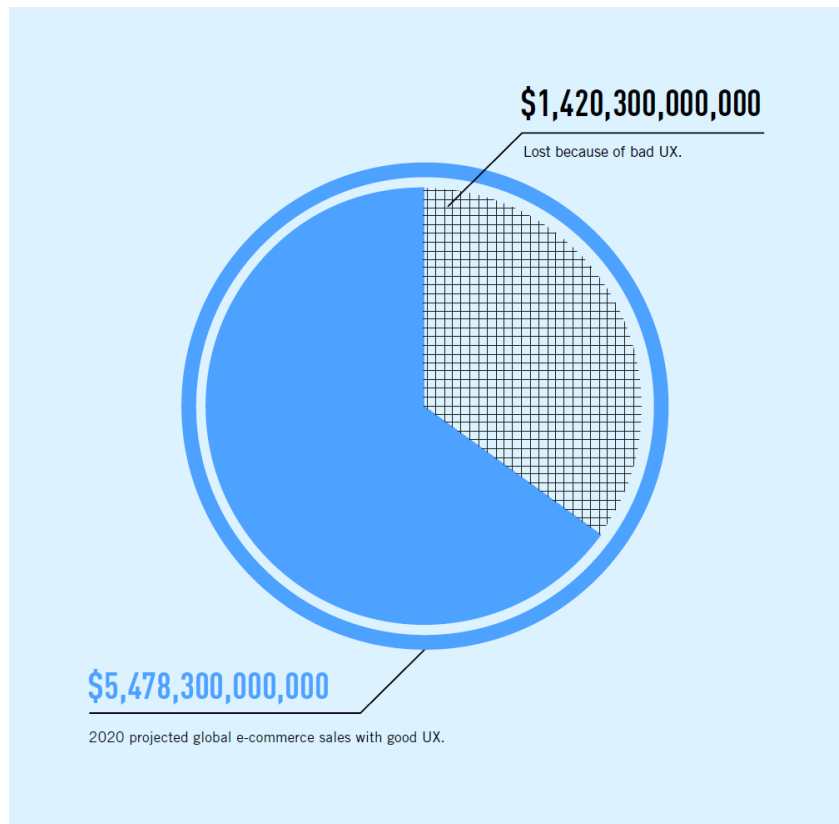
Negative Impact of not Investing in UX

- From Dr. Susan Weinschenk (HFI) – she estimates at least one trillion dollars lost on software worldwide
 - **The number of projects abandoned because they do not meet the original purpose is up to 15%, which equates to \$150 billion worldwide.**
 - **The time spent by developers reworking a project with avoidable faults is 50%.**
 - **The cost of fixing an error after development is 100x that of fixing it before development.**
 - **3 out of the 12 reasons why projects fail are attributed to user experience failures.**



Heuristic Evaluation

Trillion Dollar Problem



Heuristic Evaluation

What is Heuristic Evaluation?

- Usability inspection guidelines that are supposed to help identify UX problems
- Number of different frameworks
 - **Jakob Nielsen – 10 heuristics**
 - **Ben Shneiderman - 8 golden rules**
 - **Weinschenk and Barker – 20 categories of UX problems**



Heuristic Evaluation

Nielsen's 10 Heuristics

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation



Heuristic Evaluation

Interviewed 15 usability experts

- Greater than 4 years experience
- Broke down all Nielsen's heuristics
 - **For example: Nielsen's first heuristic**

Nielsen Heuristic	Concepts
Visibility of system status	State ...
	Location ...
	Progress ...
	Closure ...



Heuristic Evaluation

Nielsen claims that a Heuristic Evaluation can only be done by an expert evaluator

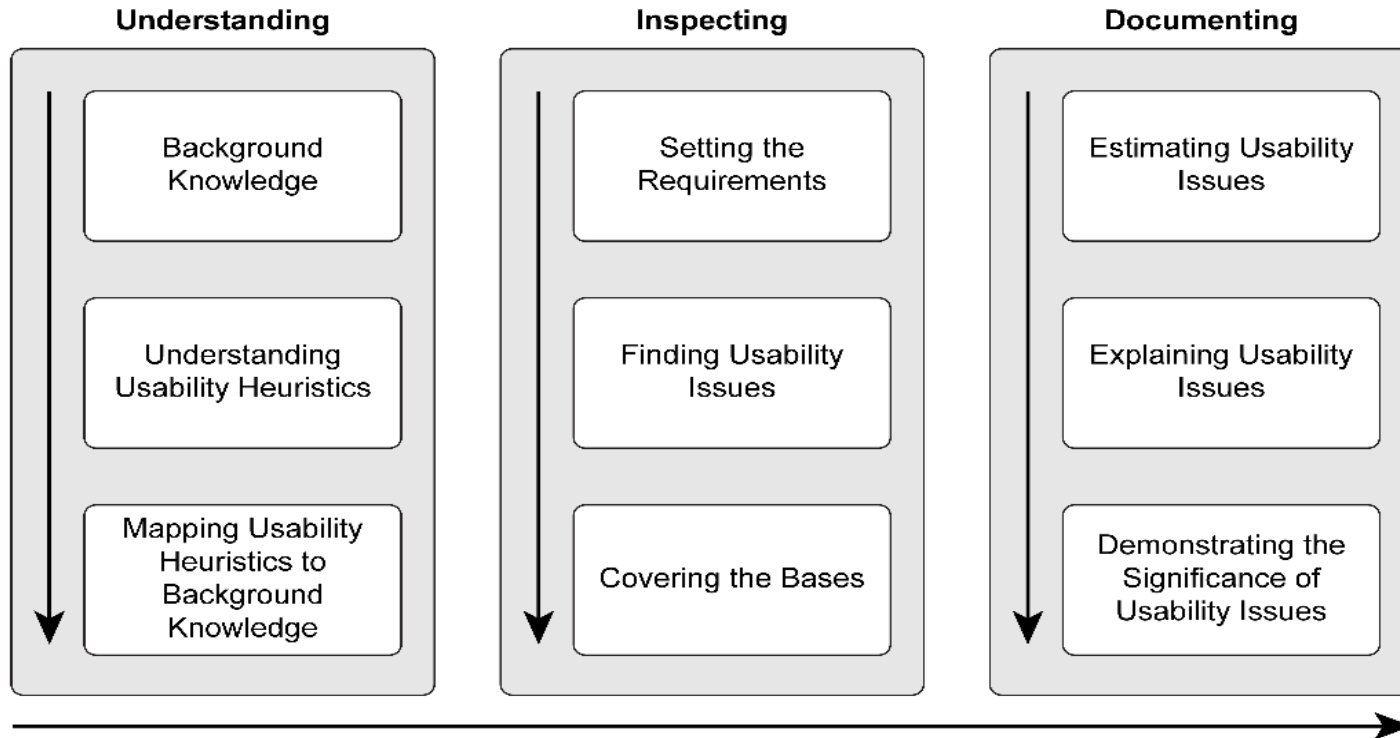
- Self-Interest – runs a UX consulting company
- Restricted – only experienced UX professionals
- Has some measure of truth
 - **How much of the success of the methodology is because of the evaluator's experience?**



Heuristic Evaluation

Coherent Heuristic Evaluation (CoHE)

Toward Increasing the Effectiveness of Heuristic Evaluation for Novice Evaluators



Heuristic Evaluation

Currently working on validating the CoHE framework

- Does not depend on HE method
- Hypotheses:
 - **Unskilled evaluators using CoHE will be more successful than those who do not use CoHE**
 - **How much worse than expert evaluators?**

Problems

- How to define quality of evaluation?



Heuristic Evaluation

Ultimate Goal

- Democratize UX evaluation through the use of non-expert evaluators

Collaboration

- Always looking for systems to do CoHE on
- Looking for non-HCI students to use CoHE
- Looking for industry partners

Questions?

