INTRODUCTION TO

USER-CENTRIC DESIGN

AND WHY IT MAKES US BETTER GAME DEVELOPERS

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Technology
Arts Sciences
TH Köln

12TH MAY 2022

RWTH AACHEN UNIVERSITY

BLOCK 1
9:45 – 11:00

BREAK
11:00 – 11:20

BLOCK 2
11:20 – 13:00

PART | 1
QUICK INTRO

PART | 2
USER CENTRIC DESIGN

PART | 3
USER EXPERIENCE METHODS

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10 HEURISTICS EXERCISE

PART | 5
FIXING USABILITY ISSUES

PART | 6
RESULTS & DISCUSSION

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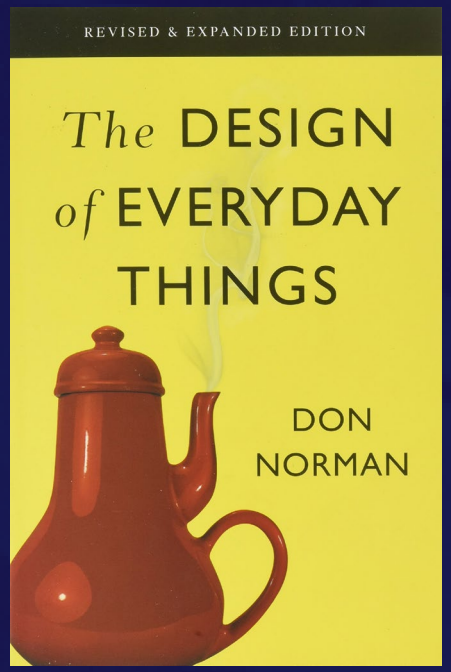
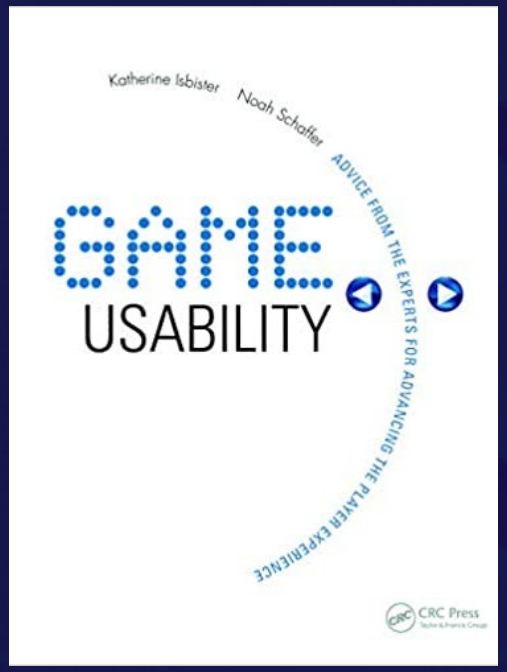
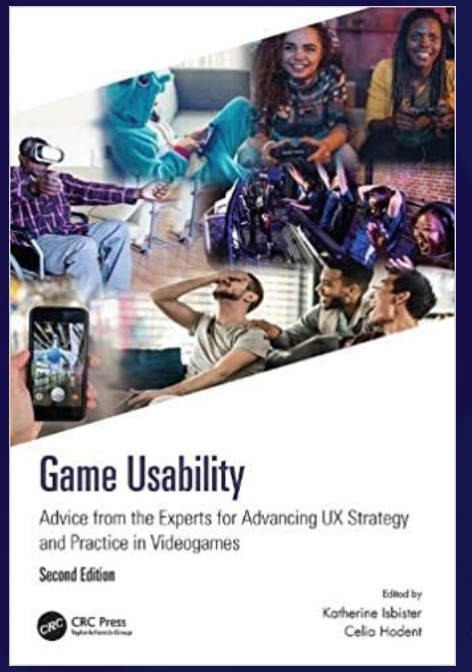
CLOSING REMARKS

WORKSHOP MAIN REFERENCES







WORKSHOP RULES

Camera optional

Introvert friendly

Try out all exercises

User Research

Natali Panic-Cidic

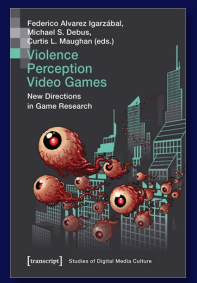
Degrees

PhD Candidate Game User Research – Cologne Game Lab x RWTH Aachen

Cognitive Studies M.A. – RWTH Aachen University

Game Studies B.A. – HHU University Düsseldorf

Conferences, Publications & Credits



WHAT I DO AS A (GAMES) USER RESEARCHER

Study Design

(Desk) Research

Stakeholder-friendly reports & presentations

Cross-Team (Research) Collaboration

User (& Player) Testing

Advocating User-Centricity

WRITE DOWN WHO IS RESPONSIBLE FOR USER-CENTRIC DESIGN

(5 MIN)

Audio Engineers

UX Designers

Environment Artists

Game Designers

User Researchers

Lecturers

USER-CENTRIC DESIGN

UI Designers

EVERYONE

Accessibility Experts

Game Programmers

Managers

Character Artists

WHAT? – THE USER-CENTRIC MINDSET

RESEARCH

Learn about your users, their pain points, and objectives

EMPATHY

Use your research insights and humanity to understand your users

ITERATION

Constantly evaluate & improve your product - approximate over define

HOW? – USER EXPERIENCE METHODS

QUALITATIVE

Focuses on the human aspect of an experience (opinions, experiences, attitudes)

- Usability Testing
- Diary Studies
- User Interviews

QUANTITATIVE

Focuses on numerical data of an experience that is expressed through statistics, surveys etc.

- A/B Testing
- Questionnaires
- Card Sorting

EXPERT

Focuses on evaluating products with experts without user involvement (fast, cheap & easy)

- Heuristic Evaluation
- PURE Evaluation
- Cognitive Walkthrough

10 USABILITY HEURISTICS

1

Visibility of System Status

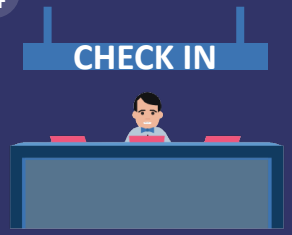
2

System & Real World Matching

3

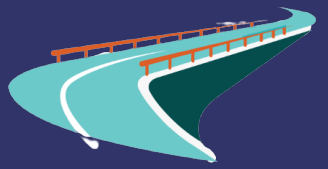
User Control & Freedom

4



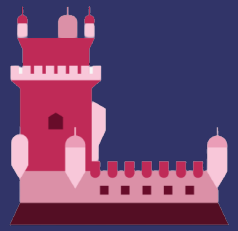
Consistency & Standards

5



Error Prevention

6



Recognition Over Recall

7

Flexibility & Efficiency of Use

8

Aesthetic & Minimalist Design

9

Error Recovery

10

Help & Documentation

10 USABILITY HEURISTICS

1 **Visibility** *of* **System Status**

Designs should *keep users informed* about what is going on, through appropriate, timely feedback.

Interactive mall maps have to show people where they currently are, to help them understand where to go next.

Nielsen Norman Group

Jakob's Ten Usability Heuristics

2 **Match between System and the Real World**

The design should speak the users' language. Use words, phrases, and concepts *familiar to the user*, rather than internal jargon.

Users can quickly understand which stovetop control maps to each heating element.

3 **User Control** *and* **Freedom**

Users often perform actions by mistake. They *need a clearly marked "emergency exit"* to leave the unwanted action.

Just like physical spaces, digital spaces need quick "emergency" exits too.

4 **Consistency** *and* **Standards**

Users should not have to wonder whether different words, situations, or actions mean the same thing. *Follow platform conventions.*

Check-in counters are usually located at the front of hotels, which meets expectations.

5 **Error Prevention**

Good error messages are important, but the best designs carefully *prevent problems* from occurring in the first place.

Guard rails on curvy mountain roads prevent drivers from falling off cliffs.

6 **Recognition Rather Than Recall**

***Minimize the user's memory load* by making elements, actions, and options visible. Avoid making users remember information.**

People are likely to correctly answer "Is Lisbon the capital of Portugal?".

7 **Flexibility** *and* **Efficiency of Use**

Shortcuts — hidden from novice users — may *speed up the interaction* for the expert user.

Regular routes are listed on maps, but locals with more knowledge of the area can take shortcuts.

8 **Aesthetic** *and* **Minimalist Design**

Interfaces should not contain information which is irrelevant. Every extra unit of information in an interface *competes* with the relevant units of information.

A minimalist three-legged stool is still a place to sit.

9 **Recognize, Diagnose,** *and* **Recover from Errors**

Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.

Wrong-way signs on the road remind drivers that they are heading in the wrong direction.

10 **Help** *and* **Documentation**

It's best if the design *doesn't need* any additional explanation. However, it may be necessary to provide documentation to help users complete their tasks.

Information kiosks at airports are easily recognizable and solve customers' problems in context and immediately.

NN/g

www.nngroup.com/articles/ten-usability-heuristics/

Guideline

Evaluation method

Applicable to games

1 – Visibility of System Status

"The system should always keep users informed about what is going on, through appropriate feedback within reasonable time."

The Legend of Zelda– Breath of the Wild 3 &
Heart-Healthbar, Marked Enemy, Map

2 – Match Between System & the Real World

Oven

Cookerydoodle

???

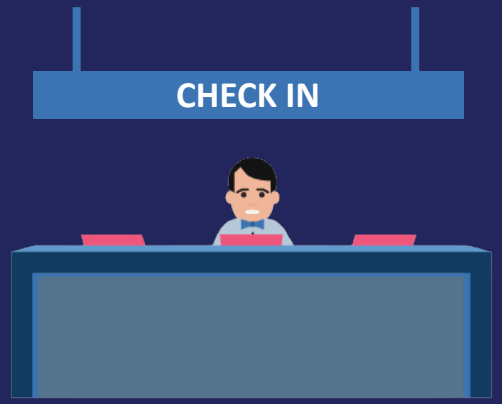
“The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order.”

3 – User Control & Freedom

“Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process.”

Resident Evil Village & Savepoint at every typewriter

4 – Consistency & Standards



Press L1 to Jump

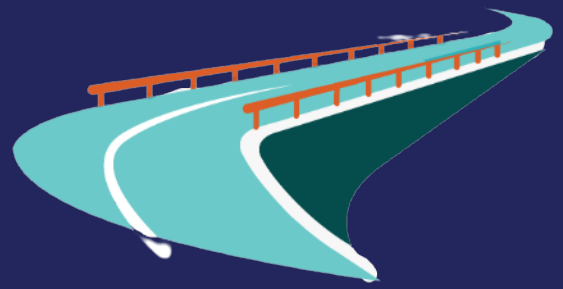
Mirror's Edge

Press X to Jump

Pretty much every other game

"Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions."

5 – Error Prevention



“Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions, or check for them and present users with a confirmation option before they commit to the action.”

Alpaca Jump & Awesome error prevention

6 – Recognition Rather Than Recall

Call of Duty: Black Ops - Cold War & Press F to pay respect recognition

"Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable when needed."

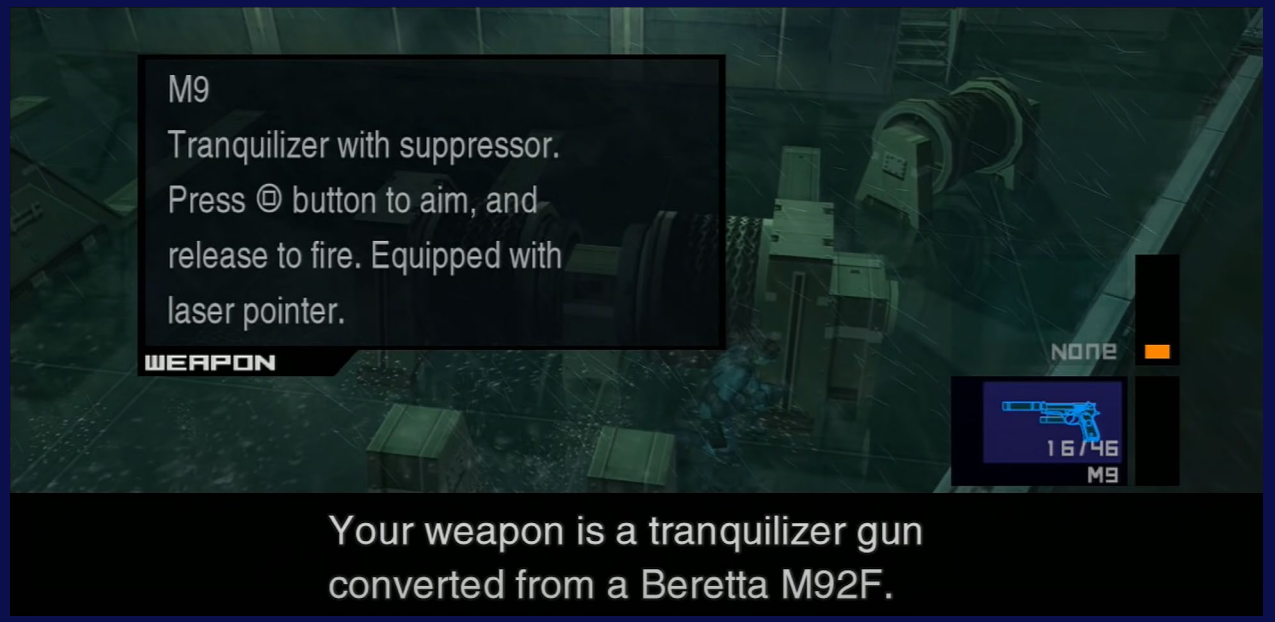
7 – Flexibility & Efficiency of Use

“Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.”

The Last of Us Part II & Forced paths

8 – Aesthetic & Minimalist Design

“Interfaces should not contain information which is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.”



Metal Gear Solid 2 & Irrelevant information at wrong times

9 – Help Users Recognize, Diagnose & Recover from Errors

"Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution."

Dark Souls 3

Unless they really like it the hard way…

10 – Help & Documentation

“It’s best if the system doesn’t need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks.”

Escape from Tarkov – Map of reserve with keys, callouts and exits

10 HEURISTICS EXERCISE

(45 MIN)

10 HEURISTICS EXERCISE I (45 MIN)

Pick your game (or other) and evaluate it with the 10 heuristics. You can work alone or together in a group. When working together, try to first evaluate the chosen heuristic on your own and then discuss the final rating with your partner(s).

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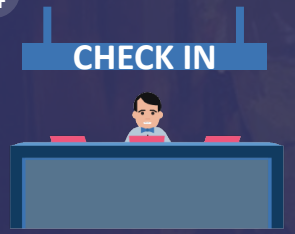

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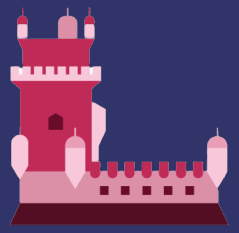
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FIXING USABILITY ISSUES

(15 MIN)

10 HEURISTICS EXERCISE II (15 MIN)

Alone or in a group, draft a plan how would you fix the usability issues uncovered with the heuristic evaluation.
Be prepared to share your results with the group.

TASK BRIEFING

Some guiding questions

- How would you prioritize the issues?
- Fixing which issue would improve your player's experience the most and why?
- How would you decide who in your team is responsible resolving an issue?
- How would you make sure the solution to an issue aligns with your players?

Think about

- How difficult was it to use the heuristics?
- What was not covered by this method?
- How did you (or would have) evaluate your design before this method?

EXERCISE I & II RESULTS PRESENTATION

(30 MIN)

USER EXPERIENCE IS A KINDER EGG – ANALOGY

WHAT? – THE USER-CENTRIC MINDSET

RESEARCH

Learn about your users, their pain points, and objectives

EMPATHY

Use your research insights and humanity to understand your users

ITERATION

Constantly evaluate & improve your product - approximate over define

ADVANTAGES & DISADVANTAGES OF HEURISTICS

ADVANTAGES

- Fast
- Cheap
- No prototype necessary

DISADVANTAGES

- Not evaluating with representative users
- Heuristics ≠ user test

USABILITY VS. PLAYTESTING

USER EXPERIENCE

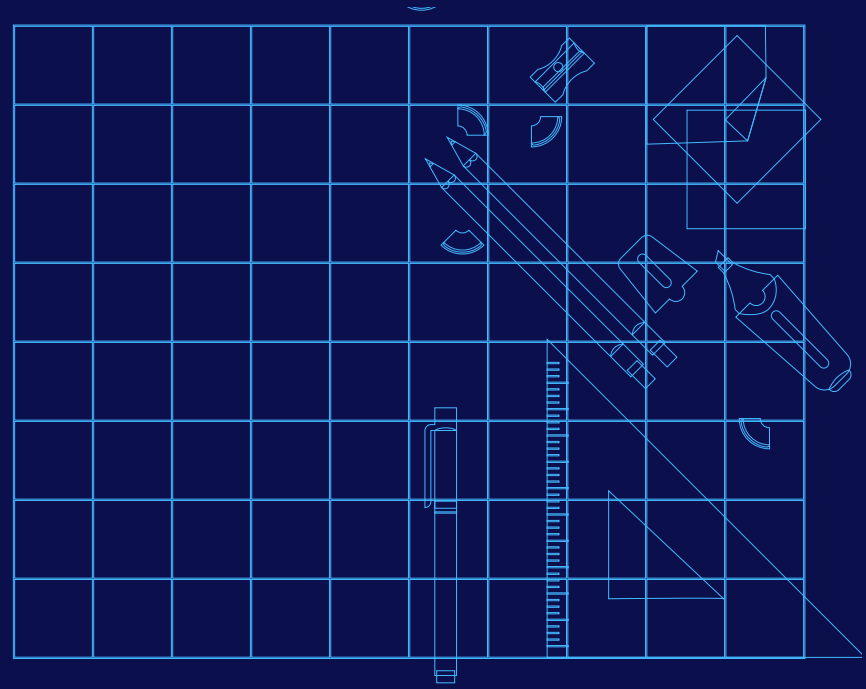
Pays attention to human limitations in memory, perception, and attention while anticipating likely errors

FUN

Focus on whether a game is fun to play & where players may be stuck or frustrated

HOW TO DO HEURISTIC EVALUATION

1. Designate evaluators (with at least one UX)
2. Pick your heuristics
3. Each of you individually analyzes the game
4. Prepare a written or presented report of found problems
5. Game developers are informed about found issues
6. Further UX research and design confirms uncertain problems & creates solutions to found problems



TEST EARLY – TEST OFTEN!

Free usability testing events in Germany

Think-aloud testing method w/ up to 6 testers

Free food & drinks :D

THANK YOU!

Let’s talk about User-centric design!

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Workshop Feedback

https://forms.office.com/r/Qmg5xaRuxv