The Lost Senses

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Games: User Experience and Analysis

Idea

- Sets vs Actual

Concept

- The three acts
- The senses and immersion
- OCR

Gameplay Elements

Player

- Single player vs game
- Player lost his eyesight and sees everything blurry (needs glasses to see clearly)
- Player lost hearing and feeling sense

Rules

- Solve puzzles to get better glasses
- Solve puzzles to further progress in the environment
- If the power bar of the glasses is empty, the player has no energy left to wear them. They have to put them down.

Gameplay Elements

Procedures/Actions

- Walk with WASD
- Put on glasses with Q
- Interact with environment with E (e.g. start a riddle/puzzle)
- Open settings menu with ESC (maybe add in beta version for slower camera movement against motion sickness)

Objective/Goals

- Puzzles to find glasses and better ones

Gameplay Elements

Resources

- Glasses to see
- Power bar for glasses

Conflict

- Player has limited eyesight
- Player needs glasses to see further
- Player needs level 1 glasses before they can get level 2 glasses

Gameplay Elements

Boundaries

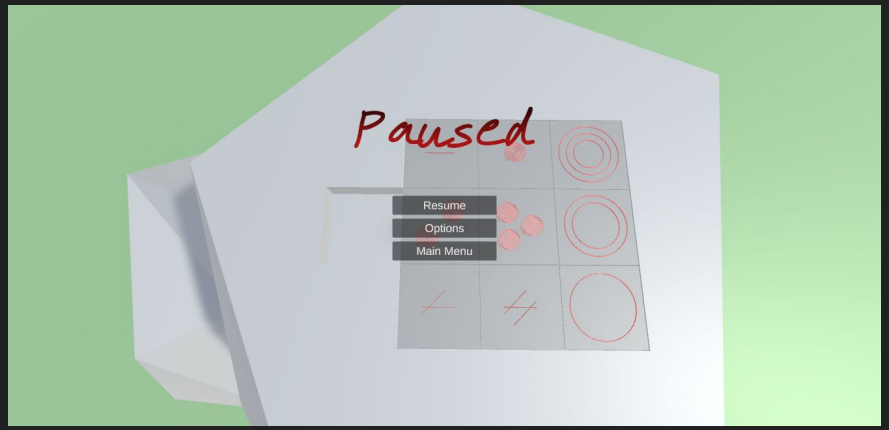
- Pausing the game is possible at any time
  - automatic saving at checkpoints for user evaluation
- Physical boundaries to limit area of movement

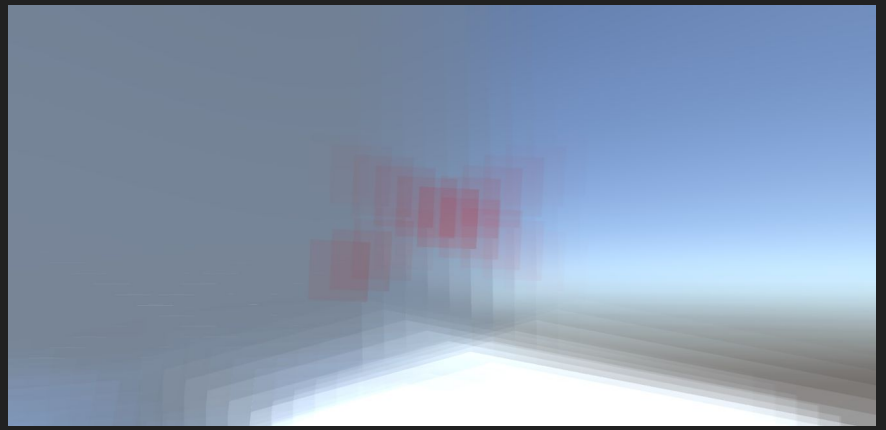
Outcome/Feedback

- By getting the best glasses the player can see everything clearly, nothing is blurred anymore

Alpha - Features

- Introduced static blur
- Initial movement system
- Complete system for carrying physics objects
- Mostly finished menus





Beta - Features

- Ability to reduce blur
- Stamina display for blur ability
- Revised movement
- Options menu
- Fade in/out while loading levels

Evaluation

Initial Observations

- Getting lost in ‘open world’
  - No paths
  - Only few decorations
- Slider Block Puzzle is hard to solve
- No indication what to do in Moving Platform Puzzle
- Break in consistency in Market Puzzle

Evaluation

Variant A

- Marked paths in open world and additional hint in various levels

Variant B

- Less blurriness

Hypothesis - Game Metrics

- Variant A reduces overall playtime compared to Variant B
- Variant B reduces playtime in most levels compared to Variant A

Hypothesis - User Experience

- Variant B increases usability compared to Variant A
- Pathfinding in Variant B is more frustrating than in Variant A

Evaluation

Observation

- Taking notes while participants were playing the game

Survey (SosciSurvey)

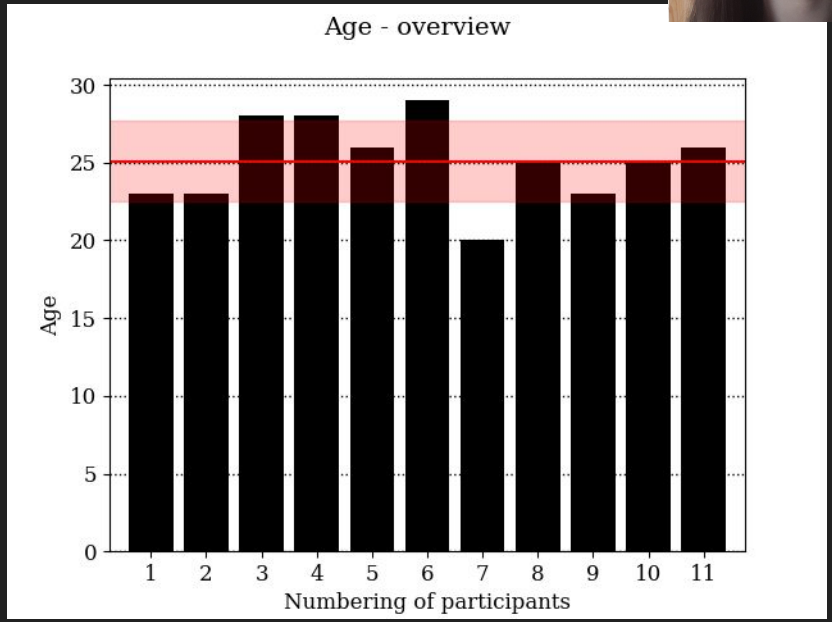
- Demographics
- System Usability Scale [1]
- Game Experience Questionnaire [2]

Ingame Metrics

- Playtime per level
- Overall playtime
- Skipped level

Results – Demographics

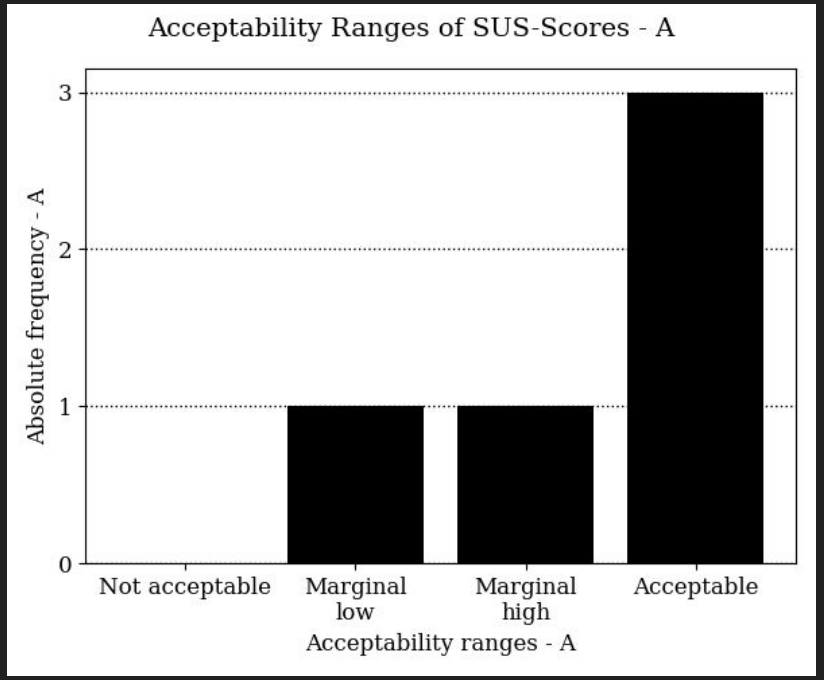
- 11 participants
- All german
- Ø 26,2 yrs (A)
- Ø 24,17 yrs (B)

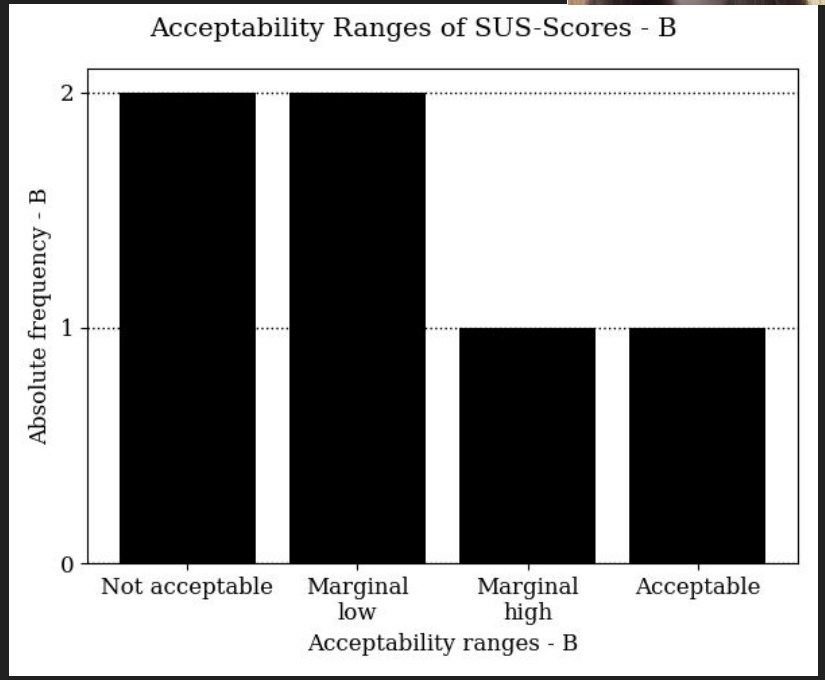


Results – Playtime

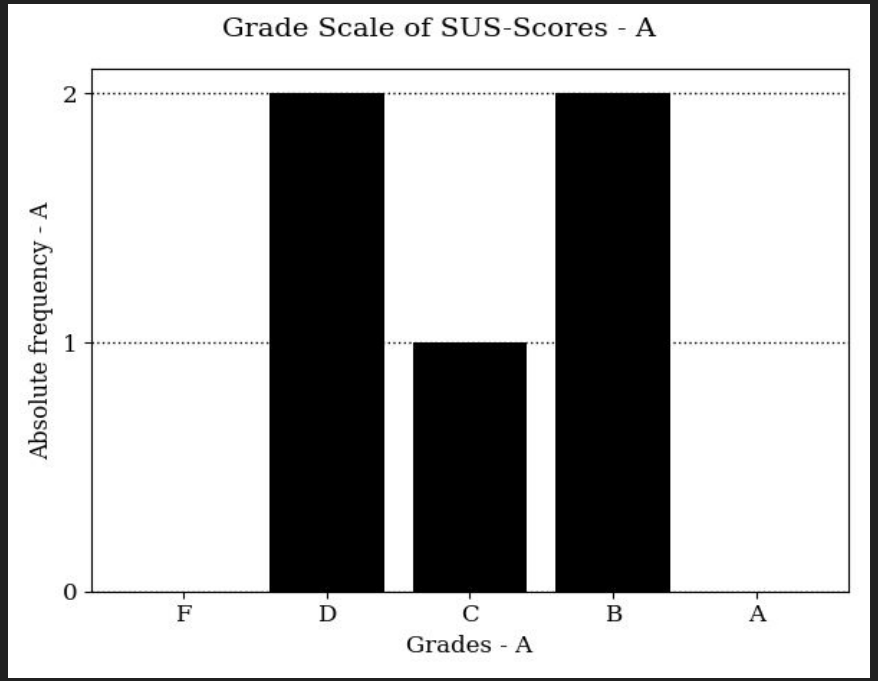
- Overall Playtime
  - Ø 54,51 min (B) → without outliers → Ø 40,93 min (B)
  - Ø 40,59 min (A)
- Most skipped levels
  - 3 times Sliding Block Puzzle
  - 3 times Market Puzzle
  - 1 time Moving Platform Puzzle
- Level Playtime
  - All levels where blurriness reduced longer playing time for Variant B

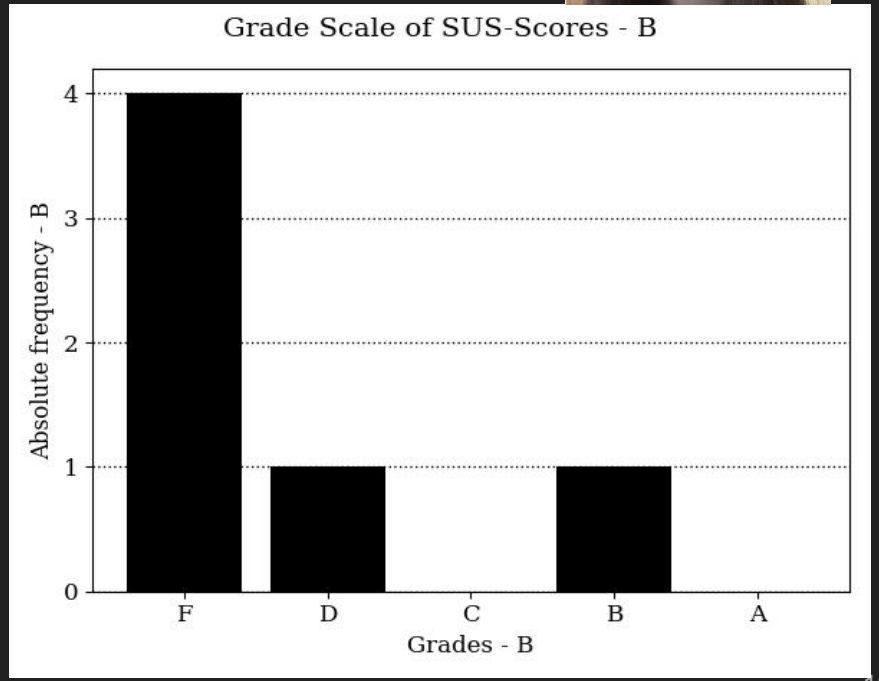
Results – System Usability Score



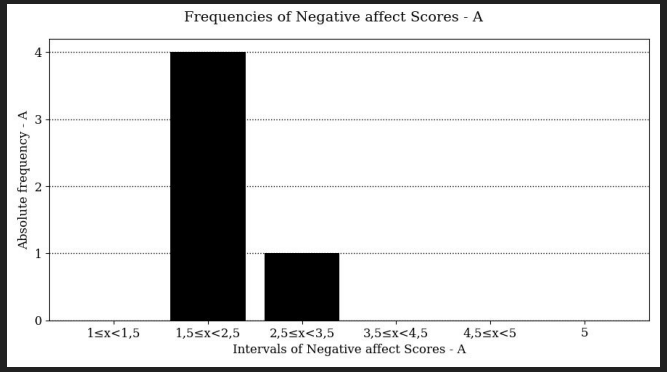


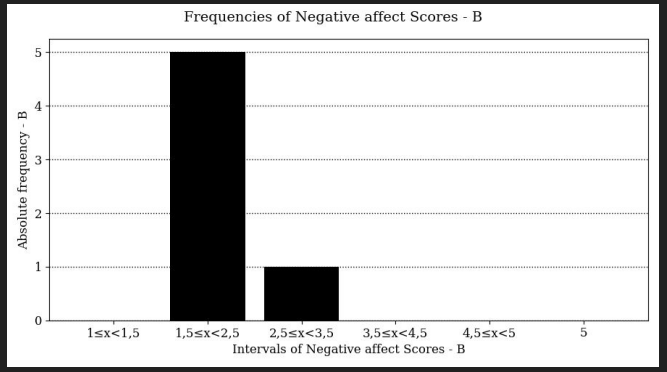
Results – System Usability Score

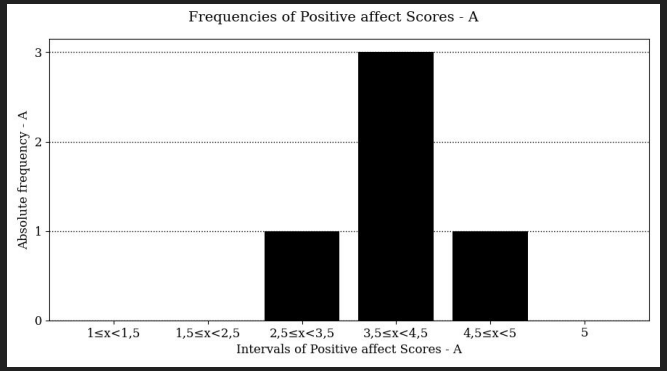


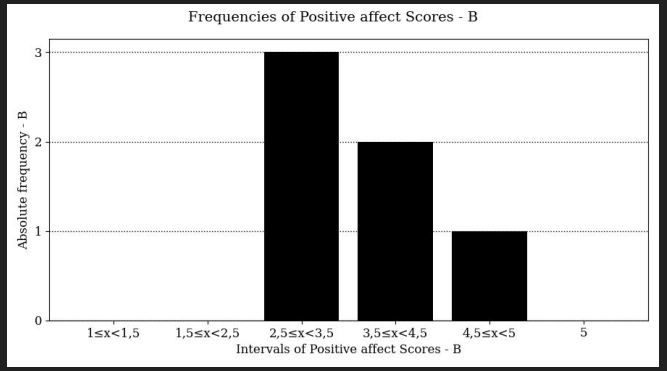


Results – Game Experience Questionnaire









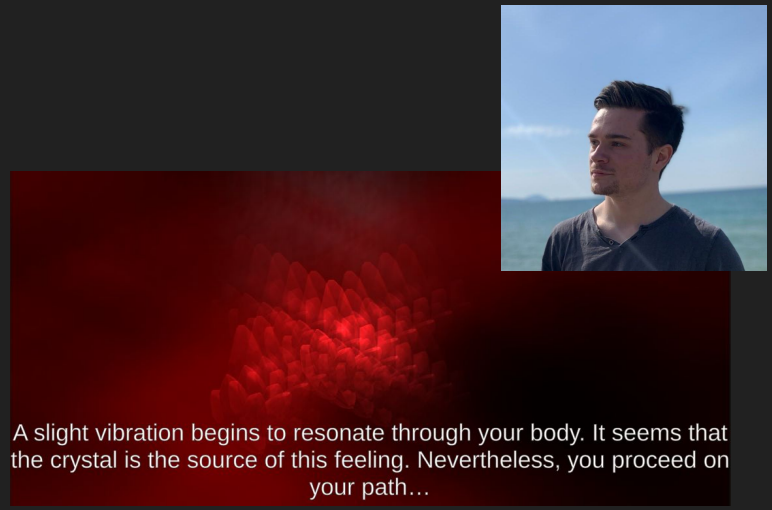
Discussion

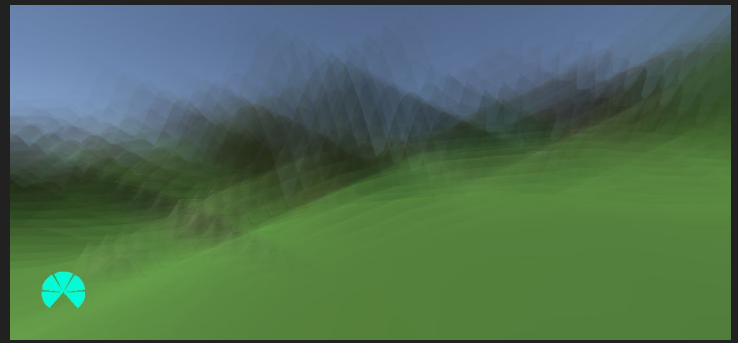
- Variant A better usability than variant B
  - Higher acceptability ranges in group A
  - Better grade scoring in group A
  - Opposite of hypothesis
- Improve game experience
  - Positive affect scores are good
  - Negative affect scores could be lower
- Playtime
  - Overall similar
  - Variant B increase playtime in most levels compared to Variant A
  - Opposite of hypothesis

Changes

Usability

- Warning when going back to main menu
- Indication to continue for story texts
- Accessibility
  - Controller support
  - Colorblindness
- Focus bar is inconspicuous





Changes

Technical

- Some objects require colliders to strengthen immersion
- Story-texts in ‘overworld’ appear multiple times
- Sliding Block Puzzle requires a solution

Levels

- Texts in Market Puzzle have to be shown longer
- 7 segment display active from beginning

Conclusion

- Higher acceptability scores for Variant A than B
  - surprising, opposite of hypothesis
  - blurriness not as disturbing as anticipated
- Cues in Variant A didn’t do much for overall playtime
  - paths in open world + audio hints

- In general no noticeable differences between Variants A and B

- Study is not representative
  - only a few participants
  - all participants between 20 and 30 years old
  - biased: friends of ours

Conclusion

What did we learn?

- “Don’t think too big”
- “Communication is key”
- Think about user’s perspective
  - “Game Idea” is unknown
  - Doesn’t know controls
  - Lack of gaming experience
- Incorporate user feedback at early stages

What worked well?

- Task distribution
- Implementation of complex / interconnected components

Outlook

- Well decorated and interesting open world
  - Invitation to explore
- 5 Acts
  - one for each sense
- More and more complex puzzles
- Different endings

Contributions

- Alina
  - “Sliding Block Puzzle”
  - Menus
  - Story writing
- William
  - “Market Puzzle”
  - Dialogue boxes in “Market Puzzle”
  - Audio/Voice in “Market Puzzle”
- Kevin
  - Act 2
  - “Moving Box Puzzle”
  - Game progress tracker
  - Initial movement
- Lennart
  - Act 1
  - Level transition / loading
  - Blur
  - Revised movement
- Dennis
  - “Moving Platform Puzzle”
  - Overworld design
  - End
  - Maze for Act 2

Sources/Literature

Assets:

[a] https://kenney.nl/assets
[b] https://assetstore.unity.com/

Survey:

[1] Brooke, John. (1995). SUS: A quick and dirty usability scale. Usability Eval. Ind.. 189.
[2] IJsselsteijn, W. A., De Kort, Y. A., & Poels, K. (2013). The game experience questionnaire.