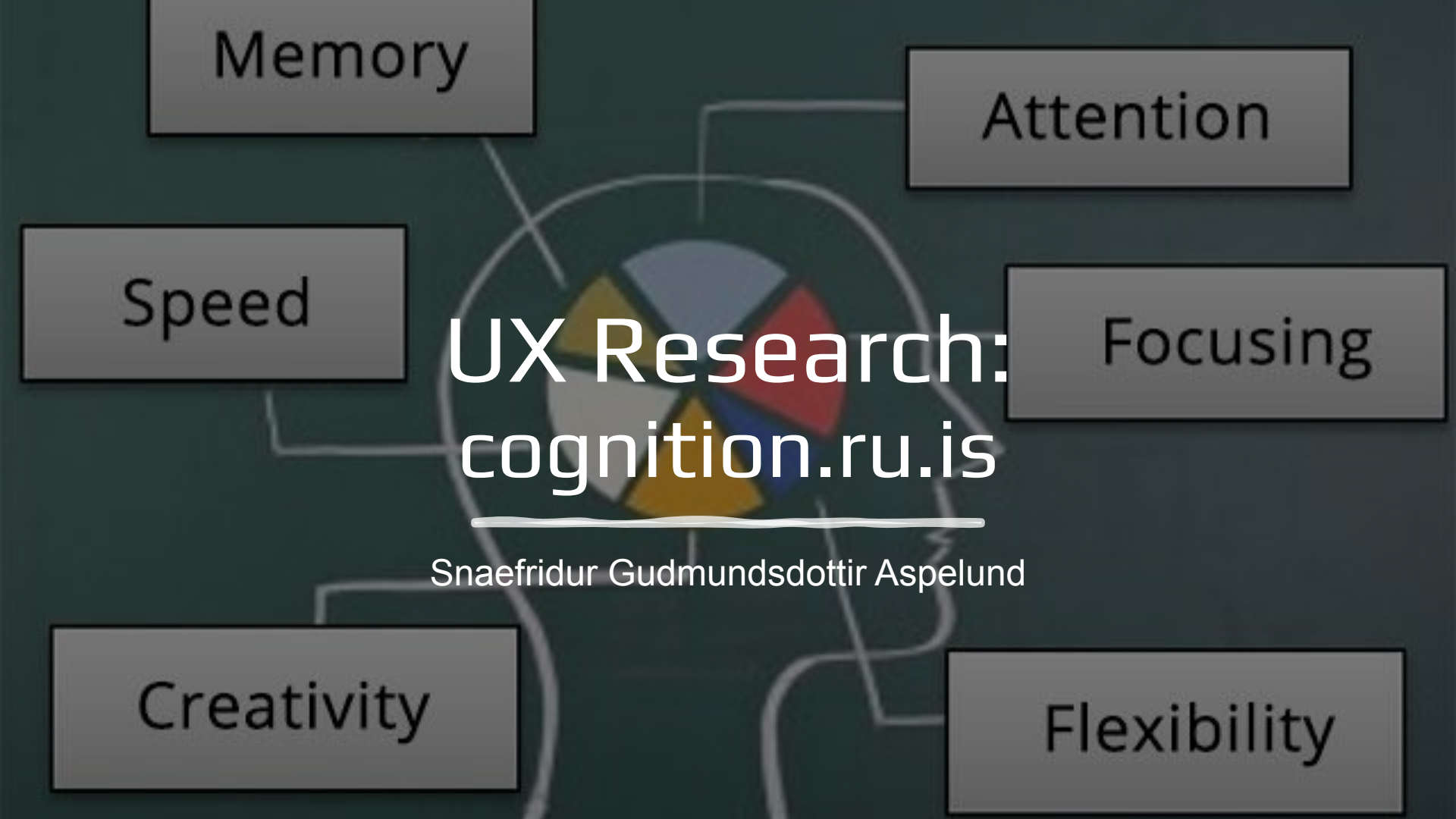


UX Research: cognition.ru.is

Snaefridur Gudmundsdottir Aspelund

Problem

- Neuropsychological tests measure cognitive function, such as memory, and are generally paper-based

- Problem: COVID-19 social restrictions
- Solution: Tests can be conducted online

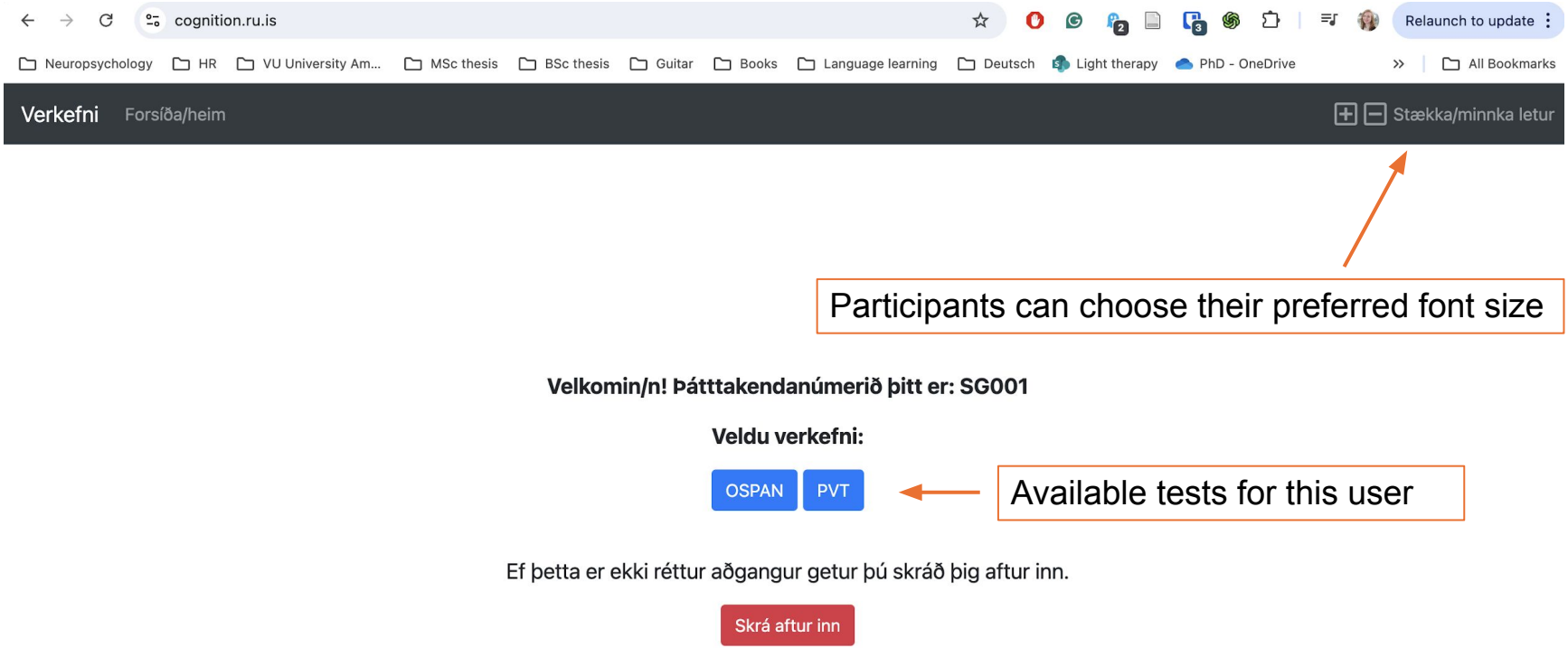
Understanding the participant needs

- Participants: women newly diagnosed with breast cancer. During this sensitive time they tend to be busy, overwhelmed and stressed
- Median age of participants is 62
  - An app might be too complicated or frustrating
- This means the computer-based neuropsychological assessment needs to be as simple and user-friendly as possible

Product

- A website instead of an app
- Participants log in with their provided participant number
- Only the tests they need to participate in are available
- Instructions and practice rounds before tests are taken

Sample


cognition.ru.is
Relaunch to update
Neuropsychology
HR
VU University Am...
MSc thesis
BSc thesis
Guitar
Books
Language learning
Deutsch
Light therapy
PhD - OneDrive
All Bookmarks
Verkefni
Forsíða/heim
Stækka/minnka letur
Participants can choose their preferred font size
Velkomin/n! Þátttakendanúmerið þitt er: SG001
Veldu verkefni:
OSPAN
PVT
Available tests for this user
Ef þetta er ekki réttur aðgangur getur þú skráð þig aftur inn.
Skrá aftur inn

Study

- Design: naturalistic observation with spontaneous user feedback

- Neuropsychological tests: PVT and Ospan

Results

- **High Negative Feedback on Testing Experience**:
  - 42.5% reflected negative feedback
    - Confusing and stressing
- **Significant Stress and Fatigue**:
  - Over 55% of relevant comments indicated that participants experienced the following, which negatively impacted their cognitive performance
    - Stress
    - Anxiety
    - Fatigue
- Emotional and cognitive load of the tests was a significant factor in the user experience

Overview of test-based user feedback

- 10 minute duration is the golden standard PVT test
  - However, the user feedback was: boring, confusing, stressful

- Ospan is a gold standard working memory test
  - However, the user feedback was: stressful and difficult

Solutions based on user feedback

- Reduce the PVT duration by half

- Make Ospan simpler, shorter and less stressful (% of correct responses removed, overall test length shortened, the math equations made simpler)

Informed changes based on user feedback

- PVT: after shortening, the negative comments were reduced by 83.3%

- Ospan: despite the previously mentioned changes, the negative comments remained (albeit fewer)
  - Still, the test was too difficult and stressful for users
  - Solution: remove Ospan

- After all these changes: 75% reduction in complaints related to the tests