Ivan Perez Torres

User Experience Research Portfolio

Index

Introduction

With an academic background in psychology and neurosciences, I am interested in understanding how people think, feel and perceive their surrounding. My goal is to develop this curiosity and knowledge in the User Experience Research field, where I can connect the users with the industry for a symbiotic interaction.

My professional experience has been developed in the tech industry, working with quantitative and qualitative methodologies in virtual reality and wearables research.

I am a curious and analytical person, my data-driven and user-centric mindset have been useful in the research projects I have worked in. I am especially interested in UX research with videogames and technology.

Methodologies I use

BACKGROUND RESEARCH

INTERVIEWS

BIOMETRIC TESTS

SURVEYS

DATA ANALYSIS

Case study 1

- Overview
- Process
- Objectives
- Methodology
- Challenges
- Insights
- Outcomes and suggestions

Overview

Product discovery research: perform research for a new product. I was part of the UX research team and R&D biometrics team.

Collaboration with other departments and stakeholders. My role consisted of providing insights for product development through research and data analysis.

Role in project: involved in the product development for the user ergonomics and usability.

Objectives

- Background:
  1. Old design of the product was inapropiate for the technology functionability.
  2. New functional properties were added to the wearable for exploration of a new product.
  3. Prototypes with new designs were made for implementing new properties and improving the wearable functionability.

- Objectives:
  1. Research the cause of the old design impairment
  2. Research the new design's outcomes in the user ergonomics and usability
  3. Research the functionability of the new properties with the new prototype designs for a potential new product.

Methodology

01

Usability studies: participants were asked to try one the product and interact with it, giving feedback and taking notes from the researcher.

02

User Interviews: the participants were interviewed for especific usability feedback, impression, thoughts and perception of the product.

03

Prototype testing: the prototype was tested with the participants for functionability insights from potential target users and real-world data collection

Challenges and solutions

- Impairment design affected a specific user group that limited the participant recruitment: insights quality due to size was compensated with more quality data from each participant
- The impariment cause were not able to be explained by the background documentation: different designs were implemented in the study
- Language barrier in some of the users: I adapted and learned the language and vocabulary necessary for the study.

Insights

- One of the designs provided information of the impairment cause
- The new product properties perform its goals succesfully,
- New insights about material used for improving product ergonometry

Outcome and suggestions

- The impairment cause was identified, and can thus be avoided in future designs
- New information in wearable material can improve the product ergonomics, this can be used in improved new designs
- New product development can carry on further due to the success of the wearable functionability

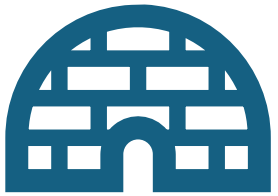
Case study 2

- Overview
- Process
- Objectives
- Methodology
- Challenges
- Insights
- Outcomes and suggestions

Overview

Exploratory methodology research: "How can we measure User Experience in a virtual reality environment"

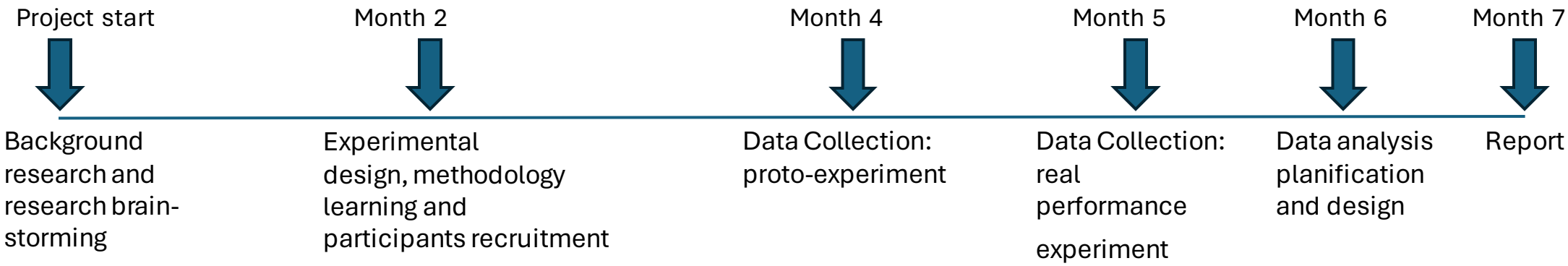
Team: Staff scientist (supervisor) and two project employees (I was one of them)



Project overview and scope: The general objective was performing an exploratory research for potential business usages of Igloo technology. Lua ja Koje project explored potential research methodologies for future research projects.

Process

- Project duration: 7 months
- Two experiments performed
- Data analysis planning: research statistical methodology and software tools for future analysis.



Objectives

- Objective: getting insights about how to measure musical experience in a virtual reality environment: “How can we measure user experience in Igloo”
- Research questions and subquestions:
    1. What methodology can we use:
        - 1.1. What objective methodology can be used
        - 1.2. What subjective methodology can be used
    2. What metrics can be used for the experience research:
        - 2.1. Metrics for immersive component
        - 2.2. Metrics for emotional component
    3. What analysis can be done from the data:
        - 3.1. What data analysis can be done per methodology
        - 3.2. What data analysis can be done for correlating the different methodologies

Methodology

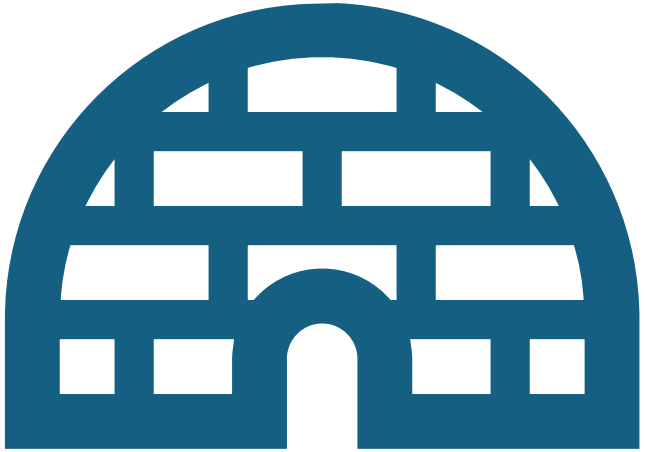
- Proto-experiment and real-world experiment with 4 participants each
- Methodology and metrics used:
    1. Immersive component:
        - 1.1. Eye-tracking → Heat-map and fixation
    2. Emotional component:
        - 2.1. Electrocardiogram → heart-rate
        - 2.2. Emotional face recogniton → “joy” emotion
        - 2.3. Post-experience survey (questionnaire) → scores
- Statistical analysis with correlation matrix for measurements correlation

Challenges

- Time:
  - Short time for a project with that complexity
- Self-training:
  - Self-training in the Usage of Igloo and Unity for being able to build the virtual environemnt.
  - I researched about how to use the methodology and collaborate with Aalto Behavioural Lab for methodology proficiency.
- Time dedication per employee:
  - Project employees were hired part-time, thus full-time dedication not possible.
- Data analysis not continous:
  - Because of limited time, data analysis had to be planned and documented by me but not performed. Data analysis was not performed by the experimental researchers.

Insights

- Subjective measurements give reliable information for direct commercial purposes
- Objective measurements give information about how the user could interact and percieve with the technology.
- Combination of both are optimal in early stages of product research.
- Methodology observations:
  - Emotional face-recognition is complex and low reliable
  - Questionnaires are not enough for measuring experience
  - Electrocardiogram is better just as complementary measurement
  - Eye-tracking is a reliable for measuring immersive experience.



Outcome and suggestions

- Eye-tracking and surveys can measure the experience in Igloo with good reliability, future research will implement this methodology
- Heart-rate is an easy methodology for complementing the research.
- Future research should include other qualitative methodologies.
- Research with limited time should be simple for securing better insights.

Details contact

EMAIL:
IVAN.PEREZTORRESJ@GMAIL.COM

PHONE: 0404471888