

Reflexive thematic analysis of sonic interaction and accessibility in virtual game environments

Study Proposal

Introduction

Video games often feature virtual environment spaces for a player to be present in. These environments may feature gameplay mechanics, spaces to navigate, or narratives to be explored to create an enveloping, immersive experience. However, many of these implementations may be designed in ways that are only accessible via a single method or style of interaction, such as a visual map, character conversations, or pressing buttons quickly through reaction-based Quick Time Events (QTE)

Certain games have experimented outside of conventional gameplay mechanics to develop accessible methods of multimodal interaction with gameplay features. For example, in 2023, *Sea of Thieves* (Rare, 2018) featured an audio-based weapon Aim Assist to accompany sight-based aiming, outlined by *Can I Play That* writer 'ActiveB1t' (2023):

“When the target is off to the left or right, players can follow the sound in that direction. To determine if they should be aiming lower or higher, the pitch of the sound changes as well. When the player’s aim is on the target, another distinctive click sound plays letting the player know.”

Similarly, through *'Can I Play That'*, Steve Saylor’s accessibility breakdown (2020) of *Ghost of Tsushima* (Sucker Punch Studios, 2020) discusses the use of wind sounds as a navigational tool alongside a visual counterpart.

Steve elaborates:

“So, first off, I wanna [sic] talk about the waypoint system or the way to navigate based on a gust of wind. From myself, personally, in my game play, this is great. I love when they can be able to create a new system that still allows the waypoint system but still keeps the emersion [sic] of it. And I love that the balance of this, where you can be able to still see the gust of wind, no matter where you are, you can see it in any direction. You can be able to turn it on at any given point to make sure that you’re going the right way and I actually really do like this.”

This study will engage in discussions with gamers to identify current barriers in video games and how interaction with sound may begin to provide improved access to specific gameplay features.

Study Ethics

This study reflects the NIME Principles & Code of Practice on Ethical Research (Morreale, 2023) where possible and seeks to “employ decolonising research methods that value a dialogic relationship between researchers and communities researched”.

Study Aims

- Identify current accessibility barriers within video games
- Document uses of sonic interaction in existing video games
- Highlight areas of inaccessibility within games that could be improved with sonic interaction

Study Objectives

- Engage in dialogic discussion with gamers about sonic interaction and accessibility in different game scenarios and develop a data corpus of this data
- Conduct a reflexive thematic analysis to generate themes surrounding accessible sonic interaction in games

Methodology

Participant Sampling

Purposive sampling will be used within the researcher's extended network to select initial participants, with snowball sampling employed where possible. Participants will be initially contacted using the participant's primary form of interaction - this is usually email or social media.

Participant Sample Size

A participant sample size of 30 participants is desired, with flexibility to expand on this amount if the project allows. Due to the diversity of disabilities that may be present in discussions, it is pertinent to capture many perspectives to provide a cohesive representation of disability within video game access. Equally, participants may experience barriers to game access but may not identify as disabled. Including the experiences across a spectrum of disability facilitates inclusivity by challenging the disabled/non-disabled binary, which in turn may result in higher participant numbers to accommodate more perspectives.

Discussion Preparation

If a participant accepts the invitation to partake in the study, an initial requirements chat will take place to establish an accessible and inclusive practice for the discussion. This will then be implemented prior to the discussion. Depending on access to a physical location, discussions will take place either in person or online via a call.

Semi-Structured Discussion

Semi-structured discussions will be conducted with the selected participants. Discussions will endeavour to "employ decolonising research methods that value a dialogic relationship between researchers and communities researched". (Morreale, 2023)

Reflexive Thematic Analysis (RTA) of Individual Discussions

A reflexive thematic analysis (Braun and Clark, 2021) of each participant's discussion will be conducted by the researcher to generate relevant themes from the discussion.

Consultation of RTA with Participants

The researcher will validate the results with each participant once the initial RTA is completed. This stage will allow for validation and further discussion around the researcher's subjective interpretation of the discussion.

RTA of Data Corpus

A reflexive thematic analysis of the data corpus will be conducted to generate meta themes between participant discussions. This will allow for distinctions to be made between shared and individual experiences.

Outcome Opportunities

- Publication to CHI/CHI Play/Audio Mostly for Accessible Sonic Interaction Design
- Research Presentation at GAConf
- A living dataset that guides further research studies

References

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