

The Inclusion and Design for Disabled Game Players in Mainstream Games

ABSTRACT

Video Games have evolved from text based games to games with many types of information given to the player – largely through visual and auditory information. When players are unable to take in this information due to disability's, are they able to play the game, and to what extent is an attempt at including these players made by the developers. Understanding the difficulties faced by disabled players and varying ranges of disabilities inhibits the effectiveness of solutions in games to accommodate them.

This research project aims to investigate the current auditory and visual solutions implemented in the video game industry, and develop solutions that can be used to design games for the purpose of accommodating both able and disabled players. If this research proves successful, it could increase the number of games on the market which accommodate both types of players.

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WHAT IS YOUR RESEARCH PROBLEM STATEMENT?

The purpose of this research is to investigate the already existing solutions to give disabled players – Specifically blind or deaf players, the ability to play games, and to further develop these and new solutions to better enhance game systems for the players.

WHY YOUR RESEARCH IS IMPORTANT?

This research is important as it introduces the ability to play games to people who previously would have had extreme difficulty or would not have been able to play games. If a successful system is found, developers could implement it while designing or coding their games and start creating games that disabled people can play relatively quickly.

WHAT IS THE EXISTING RESEARCH LITERATURE IN THE AREA?

The research literature for this topic explores two different aspects – designing for visually impaired players and designing for deaf players. Overall, the solutions proposed by the majority of the research is to design specific games for disabled players, and not to adapt

and design games to be played by both disabled and able players. This research in how disable players respond to different stimuli, while not implemented in games yet, can be used to better develop all games to be inclusive.

WHAT IS YOUR PROPOSED RESEARCH METHODOLOGY?

We will be using Qualitative methods to analyse existing research and information, and then use Quantitative methods to identify patterns through testing the made application.

WHAT RESOURCES WILL YOU NEED TO CARRY OUT THE RESEARCH?

Internet Connection, Library and online access to books and articles, A computer and software needed to develop an application to test.

WILL YOUR RESEARCH NEED APPROVAL FROM AN ETHICS COMMITTEE?

No as all testing will be on members undertaking the study.

REFERENCES

1. Raisamo. R., Patomäki. S, Hasu. M and Pasto. V (March 2007) "Design and evaluation of a tactile memory game for visually impaired children,". *Interacting with Computers*, vol. 19, no. 2, pp. 196-205 DOI: <https://doi.org/10.1016/j.intcom.2006.08.011>
2. Henderson. V, Lee. S, Brashear. H, Hamilton. H, Starner. T, and Hamilton. S (2005). Development of an American Sign Language game for deaf children. *In Proceedings of the 2005 conference on Interaction design and children (IDC '05)*. Association for Computing Machinery, New York, NY, USA, 70–79. DOI: <https://doi.org/10.1145/1109540.1109550>
3. Brook, L. J. (2017). A SOUND IDEA: AN INVESTIGATION INTO ACCESSIBLE VIDEO GAME DESIGN FOR THE DEAF AND HARD OF HEARING. Retrieved from: <https://ro.ecu.edu.au/theses/1984>