POWER OF DIFFERENCE ASSESSMENT SYSTEM

DO VIDEO GAME RATING SYSTEMS FURTHER ENABLE NEGATIVE EFFECTS OF VIDEO GAMES?

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

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April 28, 2020

SOCIOTECHNICAL SYNTHESIS

Demographic perceptions and the behavior of humans are related. The technical project involves redesigning the Power of Difference Assessment platform for The Sum nonprofit. This project was undertaken because of an interest in the underlying demographic biases that people can have, and how to learn to better communicate across demographics. The STS research examines the effectiveness of video game rating systems in preventing negative effects of violent video games. This research was inspired by learning more about how video games can shape people's behaviors. The two projects are connected in that each deal with the human mind and how it perceives the environment. Additionally, violent video game effects would directly affect the result Power of Difference results.

The Sum offers a Power of Difference Assessment to identify underlying demographic biases in those who take it. After completion, users can then schedule a consultation with The Sum to interpret their results. However, the existing platform for the assessment system is poor. It has security flaws, does not allow for multiple users to take it at once, and assessment reports must be manually created after the completion of an assessment. A 1,000 person study will be conducted for the Power of Difference Assessment, and that is infeasible with the state of the current system.

The capstone team's work includes a new and improved assessment system. Using Django, a python web framework, a new assessment platform was created. This new system fixes many, if not all, of the problems that the customer was having. By deploying the system on Amazon Web Services, the system can scale to support many concurrent users, allowing multiple users to take the Power of Difference Assessment at once. There is also much greater security, which prevents system manipulation and restricts assessment navigation to the intended flow.

Assessment reports are now automatically created upon completion, eliminating the hassle of manually generating them for each assessment. Overall, the new system greatly improves upon the old one, and simplifies the work necessary for managing the assessment system.

The STS research question deals with analyzing how effective video game rating systems are at preventing the violent effects of video games. The research question examines reasons why the current guidelines established by the Entertainment Software Rating Board system are not sufficient. To prove this, other video game rating systems were analyzed, most notably the Pan European Gaming Information. Similarities and differences of the two systems were noted, and how effective each one seemed to accomplish its job of limiting violent video game access. Other sources were used to establish proper motivation for the STS research. This mostly includes studies on video games' behavioral effects that were published in scientific journals.

Negative effects of violent video games notably include increased aggression in players. Another negative effect is Internet Gaming Disorder, which can lead to depression, academic decline, worsened relationships with family and friends, and increased aggression in players. To prevent easy accessibility to violent video games which can have these effects, video game rating systems were created. These systems assign suggested minimum appropriate playing ages to games using an age-tiered rating system and content descriptors. The Pan European Gaming Information System has an age distribution of 3, 7, 12, 16, and 18, which is equally distributed, whereas the Entertainment Software Rating Board has an age distribution of 3, 10, 13, 17, 18. Additionally, the 18 rating in the Entertainment Software Rating Board is almost never used. To better fulfill its purpose of limiting access to violent video games, the STS research concluded that the Entertainment Software Rating Board system should introduce a rating between 3 and 10 and actually use the 18 rating.

Overall, the technical project succeeded in designing a platform to enable people to better understand their own demographic biases. The STS project sought to learn about the behavioral effects of video games, and if the current systems in place effectively combat the negative effects. Together, the projects offer insight into the demographic perceptions and behavioral aspects of human beings.

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