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| Student: | Connor Newton |
| Date: | 23/10/2018 |
| Supervisor: | Jamie Hufford |
| Degree Course: | Computer Science For Games |
| Title of Project: | How Psychology Affects Difficulty Choice in Games |

# Overview

## Elaboration

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|  | With games long providing players with a range of difficulty settings, this project aims to research into what factors contribute to the psychology behind our choices. Can reward be utilized to encourage those who play easier difficulties to attempt a harder game mode?  The deliverable will be a collection of 5 to 10 minigames, through which the player will have three lives, and can change difficulties before advancing to each next game. These games will be varying in gameplay activities to ensure there is a variety of skills being tested. The lives will span across all challenges, the final data will be taken when the player either loses all lives or completes all challenges.  Data will be collected from the deliverables sent to the test groups whose choice data, and survey will be used and compare alongside the research gathered to draw a conclusion. |

## Project Deliverable(s)

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|  | I will create a deliverable containing 5-10 rapidly prototyped minigames that will work alongside a decision of difficulty for rewards after each minigame. The player will have 3 lives to not only serve as a safety net to allow for optimal data to be gathered, but also as another factor that must be considered when decisions are made. These decisions will be saved in a database for analysis after a month of data has been gathered.  There will be a large amount of research required into different theories as to what can motivate these decisions. These will be paired with a short survey that will be completed before beginning of the game. The key theories that require research into are “Maslow’s Hierarchy of Needs”, and “Self Determination Theory”. Though research into potential others will also be done.  A system will be designed to display the collected data in visual format so that trends can be analyzed to see if it is supported by data gathered by research done. |

## Project Aims

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|  | * Research into what psychology theories might contribute to player motivation.   + Maslow’s Hierarchy of Needs.   + Self-Determination Theory.   + Potential other(s). * Research into what combination of games makes for most even testing.   + Take the most suitable tests into development. * Develop a deliverable containing a collection of varying game play minigames.   + Rapid Prototyping.   + Standard & Advanced difficulty tuning. * Design a reward system that works alongside the difficulty choices to promote engaging decision making.   + Vary degree of rewards to see potential boundaries for motivation.   + Provide choice where failure could result in loss of “points”. * Deploy and Integrate an online database that the deliverables can report data back to. * Research and create an ethical questionnaire that can be used prior to the game to compare data to. * Design a system to display the data collected in a visual format. * Analise data on players choices with the supporting research gathered. * Review and report on if data is supported by the research gathered within the time frame allocated. * Research into Voronoi split screen for potential local 2 player if research proves beneficial. |
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## Action Plan

 