Exploring the differences in performance between gamers and non-gamers when completing everyday tasks viewed from a third person perspective

Arvid Bräne

Department of Computing Science
Umeå University, Sweden
arvidbrane@gmail.com

Abstract. Here goes the actual text of your abstract.

1 Introduction

The text in this will contain the following:

- What have I done?
- Why did I do it?
- The background to the subject
- What is new in this study
- References to earlier work such as [1], [2] and [3]
- Description of what third-person view is

Purpose To investigate if there is a measurable difference in performance between people whom have played games and people whom have not.

Motivation There is a constantly ongoing debate, [4], about whether playing video games produce negative side-effects or not. My study investigates one of the possible *positive* performance differences, such as few number of errors and low time consumption.

Contents A conclusive investigation of if there is a performance difference of playing video games viewed in third-person or not.

Resources The study has been completed using a custom-made rig consisting of a camera, video goggles, carbon fiber booms, 3D-printed parts, batteries and cables. References to earlier work will also be used.

Studies prior to this one have been done on the differences between gamers and non-gamers, such as [1], but none using hardware to simulate the third-person view experienced in games (see Figure 1) in real life.

Studies in writing have previously shown that most readers do not have any recognition about whether a book they have read was written in first- or third-person [5].

2 Method

In the following section we will demonstrate our method and the tasks needed to concretise credible results.

2.1 Overview

This section should also contain the following:

- Give an overview/introduction over/to how this study was completed
  - What kind of tasks
  - Rig design
  - Task design
  - Performance benchmarking
- References to earlier works
- Description about things to take into account
- Explaining the form every participant has to fill in

2.2 Survey Design

After each test subject finishes his/hers precipitation in the experiment they are prompted to fill in a form regarding the experience and their prior experience with video games. Each test subject also fills in details about name, age and sex so the test data can be paired up with the survey. The details where later removed in the results in order to protect the test subjects anonymity.

This section will describe the function and the design of the survey that the test subjects need to fill in prior to the experiment. The survey should include questions about:

- Name
- Age
- Gender
- Hours per week spent playing games
- How many years the have been playing games
- If the subject considers itself a gamer or not
- What types of games the subject plays

2.3 Task Design

In order for to get the required measurements with high credibility the tasks performed by the test subjects needed to be carefully planed, prepared and executed. To get as wide spread results as possible a few different types of tasks had to be completed by the test subjects:

Ball Control Test The test subject rolls a ball and hits a target in order for it to successfully complete the task. Number of tries required will be noted.

Balance Test The test subject will have to walk on a thin straight line placed flat on the ground for as far or as long as it can. Number of seconds and distance will be noted.

Precision Test The test subject walks forward facing thorough a preplanned course on flat ground marked with cones as fast and precise as possible. This task is then repeated, but backwards facing. Number of errors and time will be noted

Task 4 *Might add one or two more...*

2.4 Rig Design

In order to see the difference in performance a rig was constructed to produce a game-like third person view, see Figure 1. The test-rig consists of three major parts:

1. **Video Camera**: Constantly recording the test subject and generating a live stream.
2. **Mount**: Which the camera is mounted upon in order to get the correct angle.
3. **Video Goggles**: Covering the test subjects eyes so he/she cannot see anything other than the live video stream from the camera

The final result of what the rig looks like when put together correctly can be found in Figure 2.

Fig. 1. A typical third-person view in the game *Grand Theft Auto: IV*.

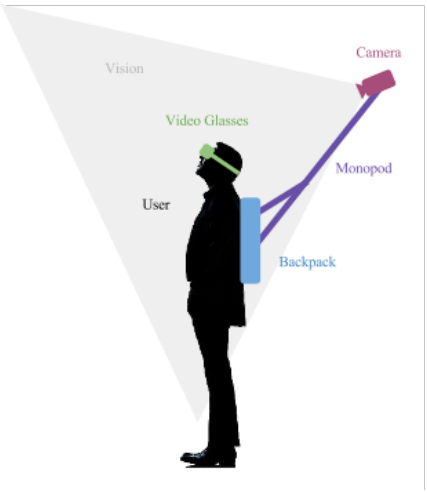

Fig. 2. A detailed overview of different parts of the rig.

2.5 Interviews

This section will consist of why and what types of interview questions the test subjects will be asked afterwards. These questions might, or might not, include the following:

- What was hard?
- What was easy?
- Did it feel like you were in a video game?

3 Results

This section will cover the results from the tests that where done and;

- The results from the tests
- Diagrams comparing the results
- Results of earlier work
- Compare the performance between the different groups

4 Discussion

A general discussion about the study such as:

- What part/conclusion in my study could be biast/not reliable
- What does my results mean?
- Earlier work, how do they compare to my work and what does that mean?
- References to earlier work such as [1]

4.1 Limitations and Drawbacks

Due to the time and budget limit there are several ways to improve upon my study, ways of doing this might include:

- Building a more rigid rig.
- Using a more comprehensive camera mounted on a stabilized gimbal.
- Using more sophisticated video goggles, such as the Oculus Rift.

4.2 Conclusion

As a finish, and a complement to the abstract, the conclusion should contain:

- What to take out from the study
- How this study can be made more in-depth
- Future work

References

[1] Schmierbach, M., Boyle, M.P., Xu, Q., McLeod, D.M.: Exploring third-person differences between gamers and nongamers. Journal of Communication **61**(2) (2011) 307–327

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