Search

Initial Project Meeting
Project Plan
Ethics Form
Usability Research
Initial Research
Identify Problem Areas
Usability Study
Create Exercises
Conduct Study
Design Potential Soluti...
Implement Solution
User Testing
Create Exercises
Conduct Study
Project Report
Literature Review
Research Report
Investigation
Design
Implementation
Testing & Evaluation
Conclusions
Abstract & Acknowledgem...
Introduction
Project Poster
Prepare Poster
Poster Session
Project Demo
Prepare Demo
Demo Session

Investigation into the Usability of Steam

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Background

Large amounts of research have already been carried out on general usability and interface design such as:

- Eye tracking in HCI and usability research (Poole & Ball, 2006)
- 10 Usability Heuristics for User Interface Design (Nielsen, 1995)
- International standards for HCI and usability (Bevan, 2001)

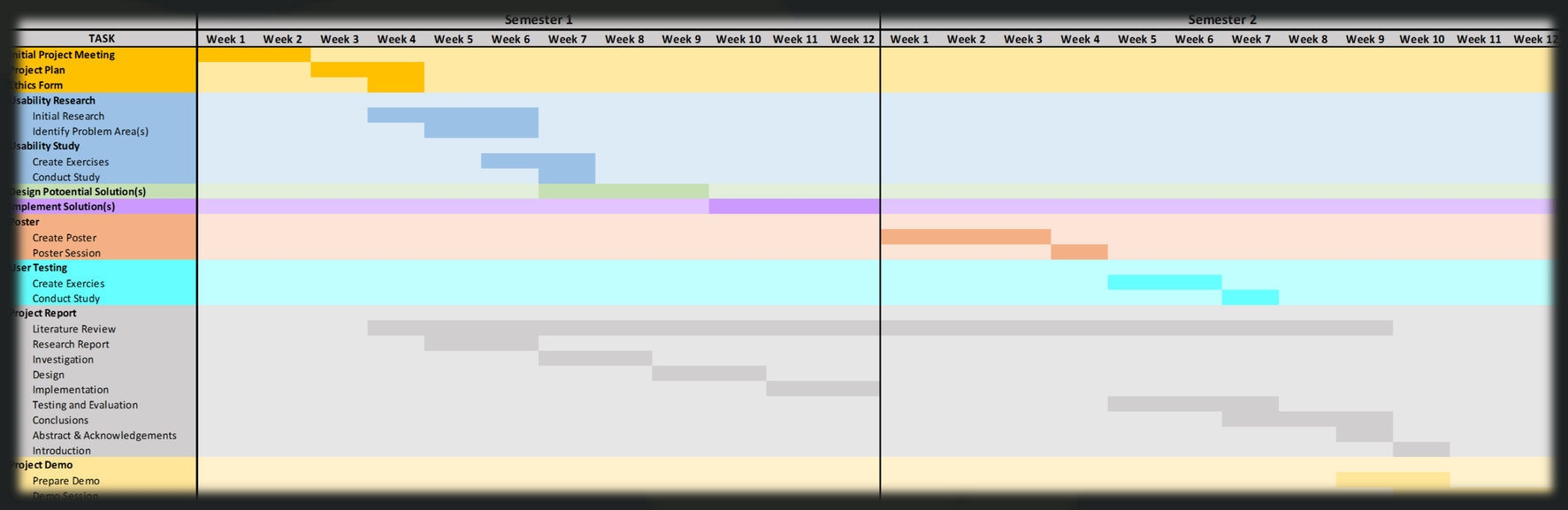
However, there seems to be a lack of consideration of this research when designing interfaces for gaming platforms.

Aims

This project looks at investigating user interface design in the gaming world. Specifically, the focus will be the extent at which Valve® adhered to usability and interface guidelines, when developing the Steam Platform, as statistics show that from 2012-2017, PC gaming (e.g. Steam), has become increasingly popular (Statista, 2018).

The project will then develop a redesigned version of the Steam interface, using feedback from research and user testing.

Gantt Chart



Research Methods

Document Analysis

The research begins with looking into interface usability standards, as well as ways in which usability standards can be measured.

This uncovered various usability metrics such as:

- The System Usability Scale
- ISO/IEC 9126-4

These metrics could be implemented into further research methods.

User Testing

Research continued with conducting user testing. It was important to make sure that test subjects had varying levels of knowledge with Steam to ensure that testing reflected as many types of user as possible.

User testing consisted of giving subjects 5 tasks to complete, commenting on ease and speed of completion after each one. The 5 tasks were as follows:

1. Logging into the system
2. Viewing and navigating the Steam Store
3. Using the Steam Library to view and access games
4. Using the Steam Community
5. Viewing and editing your Steam profile

Interviews

Once all tasks had been completed, subjects were asked to answer questions on a scale (1—5) depending on how much they agree with each one. These questions encapsulate all aspects of the System Usability Scale, originally created by John Brooke in 1986. The ratings were then interpreted according to Brooke's instructions (See results below). The higher the score, generally, the better the usability of the system being tested.

Next Steps

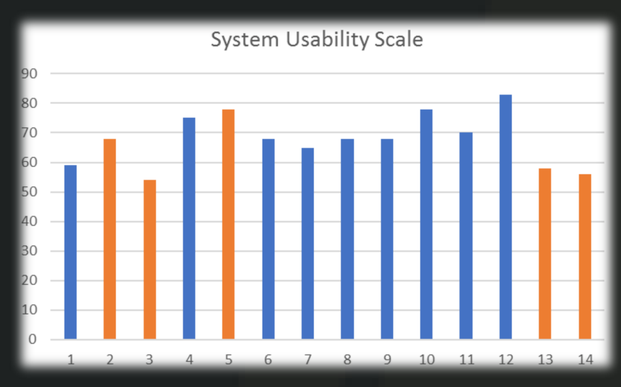
Using research collected through document analysis, user testing and interviews, a new interface will be developed that takes into account usability and interface guidelines, and comments made by test subjects.

The new interface will be created using HTML & CSS as these languages provide appropriate formatting and functions to provide proof of concept in the prototypes.

The intention is to present test users with the new as well as the current interface and perform the same tasks as in the research stage. The System Usability Scale will also be re-used.

The results using the new interface will be compared to those of the current interface to see whether there are improvements.

Results



The graph (left) adheres to John Brooke's System Usability Scale. The X-axis shows each subject and the Y-axis shows the percentage score. The bars in blue represent users who are experienced with Steam and the bars in orange represent users who are not.

Generally, experienced users found the system more usable, whereas inexperienced users, although still good, found the system less usable. Either way, these results show that Steam could definitely improve in terms of overall usability.

These results as well as feedback and general comments collected during user testing will be used when developing the new interface.

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References

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