

Luke Morgan Project Proposal

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What Makes an Effective Video Game Tutorial.

Research Proposal

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1. Introduction

This proposal will outline the goals for conducting research into what makes a video game tutorial bad or good and how this can be applied in to making one of one.

2. Background Research

To begin Research it is intend to look at games such as Portal [1] and Call of Duty 4 [2] as these are examples of games with what could be considered good tutorials. written works such as *Level up!: A guide to great video game design* [3], *The Art of Game Design: A Book of Lenses* [4] and *Fundamentals of Game Design* [5] will also be investigated, all of which are books that focus on all stages of game design and all are created from Experts in this field. These could prove as valuable resources to investigate how experts approach making games and how this can be used to inform the creation of tutorials. It will also be beneficial to look at some of the early games such as *Pong* [6] and *Asteroids* [7] these could be interesting to look at as both were having to not only teach players how to play but also what a video game is in general.

3. Aims & Objectives

The aim of this study is to find out what tutorials do to effectively teach the player how to play then apply this knowledge in to creating a short tutorial for a game of my own.

My objectives for this will be as follows:

- . Research Expert opinions on tutorials and find out what they believe separates a good one from a bad one.
- . Gather appropriate participants for a research study and find appropriate games.
- . Conduct the study with participants and conduct interviews following them.
- . Draw conclusions from this study and use this information to create a Video game Tutorial.

4. Methodology

As well as the background research stated previously, there will also be investigation into the effectiveness of some of these tutorials with a group of participants. Each person will play a selection of games which through the background research will have been found have good tutorials. Each Participant will be observed on how well these tutorials can inform the player on how to play the selected games. This information will help inform in what should be done in a tutorial to make it effective.

A mix of both Phenomenological and Positivist research philosophies will have to be used for this project. User experience will be a key part of creating a tutorial and this would benefit from a phenomenological approach as it will be dealing with more subjective opinions. However, there will also be the practical side of physically creating the tutorial an aspect that would benefit from a more positivist approach as it would lend itself better to the experimentation side of the project.

There will have to be a mix of two approaches, an inductive approach to gather user data from my case study and a more deductive approach to apply that to a tutorial.

A literature review will have to be completed which will contain a large amount of background information as well as an investigation into existing tutorials and what makes them good, in addition to this there is also the need to conduct a case study in to how effective the previously mentioned tutorials are. After completing both these the information gained will be used to inform how an effective tutorial can be created.

5. Ethical Issues

There is a need to be careful that none of the participants have photo sensitivity to flashing images. It is also important to limit the amount of time that they are in front a screen as this could cause eye strain. This would also apply to the researcher during this study. Another ethical consideration is the collection of the participants information. To limit the effect of this it will be insured that all information is stored only in secure locations and that all information is deleted once the project is completed.

6. Data Evaluation

To collect data for this project an Ethnography research method will be used by observing participants playing a selection of games and interviewing them afterwards. These will be conducted in person and recorded so it can be listened back to later and so what was said can be evaluated. The minimum number of participants that would be necessary is about 5 however ideally more would be wanted to get a larger data set to work with, but this would depend on the length and detail of each participants observation and interview.

Most of the information that will have been acquired will be qualitative data. Using information gathered from the study the experiences of all the participants will be considered and similarities between them will be found, this information should inform on what these participants found good and not so good/frustrating about these tutorials. This data will then be used to inform on what should be avoided and what should be included when creating a tutorial.

7. Development of Tutorial

The creation of a working tutorial using the Unreal Engine [8] will also be completed. Maya [9] and Substance Painter [10] will also be used to add more of models and textures to the tutorial to better inform the player on where to go and how to play. This tutorial will be planned out using a planning document like that of a game design document. When moving to the engine a simple block out will also be used to plan the layout.

8. Resources and Planning

Hardware Resources

A PC capable of running all the games that will be given to the participants as well as a controller and headphones will be required. It will also require audio and video recording equipment which shall be used to record the observations. Finally an appropriate room for these observations will also be necessary.

Software Resources

There is the need several games such as Portal [1] and Call of Duty [2] installed on a steam account that can be used in the study. Copies of Autodesk Maya [9], Adobe Substance painter [10] and Unreal Engine 5 [8] are also needed to create a prototype of the tutorial and finally a copy of Microsoft Word for the literature review.

Human Resources

Several Participants are required for the case study. 5 is the minimum amount of people however an ideal number would be around 15.

9. Project Plan

Below is a Gantt chart of the proposed project.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Research and evaluate existing tutorials				Interim Viva			Project Report	Final Viva
Research Information from experts								
Compare Information of experts and how it applies to the tutorials played.								
Find appropriate participants for study.								
Complete study with participants								
Collect and evaluate information from the study								
Use information to plan a tutorial								
Create tutorial in engine								
Summarize findings and evaluate								

10. References list.

- [1] Portal, United States of America: Valve, 2007.
- [2] Call of Duty 4: Modern Warfare, United States of America: Activision, 2007.
- [3] S. Rogers, Level up! : the guide to great video game design, Hoboken: John Wiley & Sons, Inc., 2010.
- [4] J. Schell, The Art of Game Design: A Book of Lenses, Boca Raton: CRC Press, 2008.
- [5] Ernest Adams, Fundamentals of Game Design, San Francisco: No Starch Press, 2014.
- [6] Pong. United States of America: Atari, 1972.
- [7] Asteroids. United States of America: Atari, 1979.
- [8] Unreal Engine 5, Version 5.1.1, [Software], Cary: Epic Games, 2022.
- [9] Maya, Version 2024.1, [Software], San Francisco: Autodesk, 1998.
- [10] Adobe Substance Painter, Version 9.0, [Software], San Jose: Adobe, 2014.

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GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

75/100

Intro / A&O (500 words)		
Project title; Identification of a specific problem to be investigated; Well-defined aims and SMART objectives; Explaining why this project is worth doing; Discussion of what the project needs to do in order to be a success; Description any deliverables that will be produced at the end of the project		
- Into explains overall intentions for project well with a research focused approach.	40	30
- Aims and objectives are relevant and have direct links to practical work proposed.		
- Project proposes a question that has merit and value to your field, well done.		
- Explanation given of objectives needed to fulfil project goals.		
Background to the Project (500 words)		
Description of how the work to be done by in the project relates to	40	30

the work identified in the literature review; Discussion of any ethical issues raised by the project Identifying what has already been done within the field; Topic familiarity; Brief literature review using appropriate sources – 6-8 journal papers and book chapters rather than just websites; Selection of relevant models & concepts - Background of project gives good breakdown and description of work to be carried out in order to successfully answer the problem posed. - Identification of previous attempts to differentiate video games tutorial noted with aim to reference these works in main project. - A good amount of topic familiarity evident. - Wide range of topical research planned and explained. - A comprehensive Gantt chart used in order to illustrate key milestones in project.		
Document Presentation		
Correct spelling, grammar and punctuation;	20	15

Flow of narrative/fluency; Coherence; Word processed ; Correct use of referencing with bibliography; Strict word limit - Document is presented well and is has good narrative flow. - References used correctly in IEEE format. - Bibliography present and matches IEEE references throughout. - Correct grammar, spelling and punctuation used throughout document.		
TOTAL	100	75

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