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The Impact of User Feedback on the Usability of Development Tools

GDEV60001 Games development project

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# Title Ideas:

The Impact of User Feedback and Surveys on the Usability of Development Tools

Enhancing Development Tool Usability Through User Feedback and Surveys

Evaluating the Role of User Feedback and Surveys in Improving Development Tool Usability

A Study on the Role of User Feedback and Surveys in Development Tool Usability

# Abstract

***An overview of the project***

This is a summary of the whole report’s contents. Readers may decide whether to read the whole report based on the abstract and therefore it should provide enough information for them to understand what the dissertation is about, including the results of the investigation.

The abstract is written last, even though it is presented at the beginning. It should describe the work that has been carried out, not the work that will be carried out.

# Introduction

***What is the reason you are doing this project?***

This gives the background to the investigation. It puts your investigation into context and gives the reader some idea of the value and importance of your work. It tells the reader why this is an important subject to investigate.

# Aims and Objectives

***What will you be doing?***

You should have a clear statement about the purpose of your study (aims) and how you are going to achieve those aims (objectives). State what you are trying to achieve and how you will achieve it. This is a crucial part of the report as it will be judged on whether your aims and objectives have been achieved.

# Literature Review

***How are other people doing it?***

This section will inform the reader of the current thinking in your specific topic. It will place your research in context and show how you are building upon previous knowledge and any areas of contention should be highlighted. This section might also include information about which data bases you used, which search terms, etc. Ensure you cite your sources of information within the text and add an accurate reference list at the end of your work.

# 

# Development and Research Methodologies

The development of the terrain generation tool was an iterative process, where user feedback shaped the tool’s usability and functionality. This section outlines how the development and research methodologies were integrated the make sure that the tool met user needs and was refined based on the feedback received.

A range of development methodologies were considered. Mihai Liviu DESPA’s (2014) comparative study on software development methodologies lists 21 software development methodologies, five were evaluated for this project. **Prototyping,** is a model using prototypes that are sent to the “Project Owner” in this case the users to gather feedback where the feedback is considered and used to develop a new prototype and then repeated. The dilemma faced is that the prototype is developed to meet the bare minimum for the specification and not developed with intention of being the final project until the owner decides it is ready and then it enters the actual development phase. **Iterative and Incremental Methodologies,** unlike prototyping, this approach builds upon previous iterations rather than discarding them, reducing wasted development. This methodology accommodates the limitations of a one-person team along with the time given between iterations to receive feedback. **Rapid Application Development,** this methodology develops by splitting development into modules, feedback is given on the separate modules and modules can be developed simultaneously, and iterations of modules can start the second feedback is received on one. This approach is incompatible with the development timeline and the ability to get user feedback as it is unsustainable to get feedback on each individual module. **Scrum** is a sprint-based methodology where each sprint results in a functional prototype. Development starts with a backlog of tasks; each sprint should last no longer than 4 weeks. This meshes well with the approach intended where each built tool is rapidly released for testing in short intervals though the back log must be finalised prior to the start of the next sprint. **Adaptive Software Development Methodology,** this final methodology is like scrum though differs as it accepts feedback and changes in all stages of development compared to the back log method which is more fixed. Comparing this to the other methods we can see that it offers the structure of set development whilst offering the flexibility of adding the feedback from the surveys through development.

https://medium.com/@yassin.lazar/design-science-research-methodology-4577f732a1fa#:~:text=The%20methodology%20involves%20a%20cyclical,with%20practical%20problem%2Dsolving%20techniques.

Ultimately the chosen development methodology was Adaptive Software Development with a consideration of the Design Science Methodology as it revolves around a “cyclical process of problem identification, problem analysis, artifact design and development and evaluation”.

Before the research can be conducted a minimum viable tool would have to be made, so the initial scope of the tool would have to be determined. During development a weighted backlog system will be used to keep track of the features and changes that have to be made within the current development cycle.

Initial Scope of the tool consists of two terrain generation algorithms, Noise and Diamond-Square, Terrain Brushes such as Raise, Lower and Smooth along with the ability to generate terrain feature such as rivers canyons and mountains and Exporting. The development of the first tool started with the current back log as follows

|  |  |
| --- | --- |
| Priority | Back Log |
| 1 | Terrain Rendering |
| 1 | Noise Terrain Generation |
| 1 | Diamond Square Terrain Generation |
| 1 | Export as OBJ file |
| 2 | Terrain Brushes |
| 2 | Importing Terrain |

A screenshot of a computer

Description automatically generated

***How will you carry out your investigation?***

This section is important because if you undertake inappropriate methodology your results and findings will be disputed. The reader needs to know what you did to find out information so they can make a judgement about the suitability of your methodology.

In this section, you state what you have done to achieve your aims, what you did to find the information you need, and, why you did it.

The methodology section can include.

* Research paradigm used, in other words, the type of research you used and why.
* Sample Strategy - if you are using one you should provide a full explanation of who you used in your sample and why.
* Materials and equipment used.

Justify your decisions by referencing back to best practice.

# Results and Findings

***What have you found out?***

Sometimes this section can be merged with discussion and analysis

It tells the reader what you have found out from your investigation. It is objective; there is no interpretation of results in this section (that comes in the discussion). It objectively states the findings of your research. If you have done primary research this is where you present your findings. You may include tables and graphs, but also need to explain the results in words. Any raw data should be included as an appendix.

# Discussion and Analysis

***How has the project gone?***

This covers the interpretation of the findings, evaluation of the significance of the findings and a general discussion of the investigation. What do your findings mean? In this section you should consider questions such as:

* What has your investigation shown?
* Did it achieve its objectives?
* What theory/literature does it support or contradict?
* What are the most plausible explanations of your findings?
* Are there any possible criticisms of the investigation?

The discussion should also:

* Build on the material in the introduction and literature review
* Evaluate the adequacy of your methodology
* Suggest design features that may have affected the results
* Include whether the results would be different under different conditions

# Conclusion

***What conclusions have been reached?***

What has your investigation led you to conclude?

A conclusion:

* Demonstrates that you have achieved what you set out to do
* It provides the reader with a sense of closure on the topic

It might be worth going back to the aims and objectives or your introduction and making sure your conclusion is in line with what you said you would be doing.

# Recommendations

***What would you do in the future?***

Use your findings and analysis to make recommendations. You may recommend that further investigation is undertaken if you realise that there were gaps in your methodology or anomalies in your findings. Alternatively, you may advise that some actions be considered.

# References

Make sure references are given correctly. See Staffordshire University [Refzone](https://libguides.staffs.ac.uk/refzone/harvard) for more information.

We are using Harvard Referencing.

**Referencing guides**

<https://www.citethemrightonline.com/category-list?docid=CTRHarvard>

<https://libguides.staffs.ac.uk/ld.php?content_id=31264350>

<https://libguides.staffs.ac.uk/ld.php?content_id=9572296>

You may want to use Mendeley for your references

<https://www.mendeley.com/>

# Appendices

Appendices is information referred to in the main document. It is not included in the word count.

Do not put results here: only the raw data should be presented in an appendix. Other materials that may be included in an appendix includes, for example, blank questionnaires, copy of written tests used.

Remember do not include anything in an appendix that has not been referred to in the text.

## Appendix 1 – xxx