Thesis Outline Template

Overview

This document provides a description of the parts of a thesis outline – and an example of such an outline. Although they may have different names, the main sections of the thesis are as follows:

- Introduction: Problem/Question Area
- Survey: State of the Art
- Thesis Problem/Question
- Method
- Results
- Conclusions

(Note also that in different disciplines, the sequencing of these elements may be slightly different.)

Template

Introduction: Problem/Question Area

Readers want to know what larger problem exists in the world that is still not solved.

Therefore, briefly describe some **problem** that needs to be solved (or **question** that needs to be answered). In some ways, this is a "larger" problem area from which you will select a more limited problem or question to address. This is usually in the form of a statement describing some area of larger human importance.

This section answers the question: **What is the problem/question area where this thesis work proposes to make a contribution**?

Survey: State of the Art

The previous section ended by stating an important problem that needs to be solved – or question that needs to be answered. Now the readers want to know how much progress people have made on solving the problem or answering the question. In other words, readers want to have a fairly clear idea about the current state of the art ("what has already been done") as they read a thesis. This will help them understand **how the author's thesis contributes in a new way to what has already been done**.

Therefore, describe briefly the major attempts to address the problem area described in the Introduction -- and their current status. To help organize your thinking, present the three **main** current approaches to the problem:

1) The Foo Approach [reference 1, reference 2, reference 3],
2) The Bar Approach [reference 4, reference 5, reference 6]
3) The Baz Approach [reference 7, reference 8, reference 9].

Note: this is **not** the place to talk about your solution – nor to critique the existing work.

This section answers the question: **What are the major types of attempt to deal with this problem area?**

Thesis Problem/Question

Now that readers understand what kind of work is being done in the problem area, they want to know **what kind** of contribution you believe you can make to **the current effort**.

Therefore:

1. Tell readers **what** (not **how**) you intend to contribute
2. Show that it is not yet done by anyone else (by reference to the work you described in the Survey)
3. Convince the reader that your particular contribution will be important to the overall work on the problem
4. **Make a clear "promise" to the reader.** This is the section where a **promise** is made to readers – and careful readers will be checking the Results and Discussion sections to see if the thesis **delivers** on the promise. In particular, it is very helpful to write with a **clear idea** of **what you would like the reader to be able to do** as a result of reading the thesis. Should the reader be able to design better programs or know which models of interaction to use/avoid or create better user studies or ...?

This section answers the question: **What is your proposal for an original contribution to the current work on the problem area?**

Method

Readers now want to know **how the contribution is made** – and they want to trust the author's **choice** and **execution** of this "how."

Therefore:

1. Provide readers with a brief statement of how you **motivate** the choice of method
2. Provide readers with a brief description of your **protocol** ("what recipe you followed") to get your results

This section answers the question: **What was the protocol – and why?**

Results

Having read the protocol, the reader now wants to know what **actually** happened during the study.

Therefore, provide a description of "what happened."

Note: to distinguish between "method" and "results" it is helpful to think about **what someone would need to know to replicate your study**. The parts that could be repeated are "method" – the possible differences are the "results."

This section answers the question: **What happened?**

Conclusion

Now that readers know “what protocol was followed” & “what happened” – they are very interested in “what it all means.”

Therefore, describe:

- Your interpretation of the results
- Your major contribution(s) to work on the problem area
- Significant questions for Future Research

Note: this is where you **deliver** on the promise of the thesis.

This section answers the question: **What are the major insights**?

Example Outline

Introduction: Problem Area

People suffering from psychiatric disabilities often experience difficulties handling their daily life, especially social situations. There is ongoing research into the use of computers to help these individuals. In particular, there is work to develop systems that can help with evaluation and treatment of patients. However, there is still a great need to develop effective computer-based treatment for the support and rehabilitation of people with serious, long-term disabilities.

Survey: State of the Art

There are several approaches to developing computer-based systems to assist people with psychological disabilities. There are AI ("artificial intelligence") systems that help with diagnosis [reference], as well as others that perform counselling [reference]. There are also less "intelligent" software systems, where, for example, users navigate menu-systems or multiple-choice scenarios [reference]. Finally, there is research into the use of computer technology as mediating systems – such as chat, video-conferencing, and VR -- for therapists to interact in real-time with patients [reference].

Thesis Problem/Question

It is important to see whether software-based systems can help people who have trouble with everyday activities. However, very little of the existing research has looked at how software-based systems can help users with severe psychological disabilities, such as schizophrenia, participate in "everyday activities."

The main focus of this thesis is to explore whether this specific user group has particular needs – and if so, what they are -- in the development and use of computer-based therapy. In particular, the thesis reports on a study to understand some of the design implications that arise for people with debilitating psychosis who use **scenario-based software with fixed choices** to prepare for everyday situations.

Method

In order to explore the thesis problem, a scenario was built using a program called the Social Simulator. The scenario was "the first social gathering for coffee at a new job." The scenario-based system allowed users to make certain pre-defined choices at different stages of the social gathering.

This program was then used as the basis for qualitative interviews with five people who have or had serious disabilities participating in "daily life." All of the subjects had some degree of computer experience. A protocol was used for questioning, the sessions were video-taped, and logs were maintained of the software interactions.

Results

In general, users were positive about the program; they found it easy to use – and reported that it was enjoyable. Observations also indicate that there were no major "usability" problems.

With regard to the usefulness of the program, the responses were mixed. Some users enjoyed the fact that the choices were pre-determined – others found it frustrating that

there were situations where the choices available didn't match their expectations. Furthermore, several of the users experienced the software as something "testing" (rather than helping) them.

Conclusion

This particular user-group raises serious issues for the design and testing of software systems.

The testing resulted in some understanding of issues that can be useful to consider when designing software for this target group, as well as insights of what to think about when creating a study with participants suffering from psychiatric disabilities.

Since this user group is particularly concerned about "doing what normal people do," special care must be taken when conducting the interviews. This concern also means that designs that they find comforting (such as pre-determined choices) may not be the most appropriate for their needs.

In particular the results of this study suggest that **scenario programs with fixed choices** may be more suitable for situations in which obvious choices are a central feature of the activity, rather than for more open-ended activities such conversations.