

Research Project Outline

1. Introduction

Background information related to the experiment must be included in the introduction. It should not be assumed that the readers understand all the details or even the big picture of the field examined in the report. The current thinking on the topic of the experiment should be summarized in this section. Similar experiments done in the past must be included as well as how the current experiment goes beyond previous research. The introduction should be approximately 2-3 pages long. Most, if not all, of the sources cited will be referred to in this section. Follow either MLA or APA formatting for the parenthetical citations used throughout in this section and throughout the project.

2. Abstract

The abstract is a short (250 words or less) summary of the experiment. All information in the abstract must be discussed at length in some other section (the abstract is a summary, not a forum for introducing new information). All of the significant aspects of the experiment must be recorded in the abstract, including:

- The question addressed by the research
- The purpose of the experiment
- A brief summary of the procedures
- Independent and dependent variables
- Any controls used
- A summary of the data (results)
- How the data was analyzed (statistical tests)
- The conclusion
- Factors that might have introduced errors or uncertainty
- Ideas or concerns for additional research

3. Hypothesis

The hypothesis is a declaration of a testable prediction. A null hypothesis should also be included.

4. Procedures/Methodology

Detail each step in the experiment and the materials and equipment used during data collection and analysis. Include the type of statistical test performed and the name of the software used to calculate the statistics. The procedures should be in paragraph form, not a list.

5. Results/Data Analysis

All of the relevant data tables and graphs appear in this section. The visually displayed information must be easy to read and well organized. Any inferences made must be based on the data and explained in this section. A few paragraphs should be included as a discussion of how the data was collected and organized and the rationale for the statistical tests performed. Any factors that might have introduced errors or uncertainty into the results should also be identified and discussed in depth.

6. Conclusion

The conclusion summarizes the results as they relate to the hypothesis. Restate the results in summarized form and the confidence (*p score*, *F² value*, etc.) you have in the conclusion. This section must also include ideas of what additional experiments should be done or how the same experiment could be repeated with some changes to gain a better understanding of the relationship between the variables.

7. Bibliography (Works Cited Page)

A minimum of five credible sources must be cited with annotation. Follow the MLA or APA Style Guide for both the works cited page and the parenthetical citations used throughout the report.

8. Acknowledgements

The purpose of this section of the report is to give special thanks or credit to the people and organizations that supported the research in some significant way.