

Guidelines for Final Report

CONTENTS:

LETTER OF TRANSMITTAL (not attached to report itself)

TITLE PAGE	i
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
AUTHORSHIP PAGE*	iv
TABLE OF CONTENTS (from title page thru appendices)	v
LIST OF TABLES	vi
LIST OF FIGURES	vii
EXECUTIVE SUMMARY	viii
I. INTRODUCTION	P.1
II. LITERATURE REVIEW / BACKGROUND	P.#
III. METHODOLOGY	P.#
IV. RESULTS AND DISCUSSION / ANALYSIS	P.#
V. CONCLUSIONS & RECOMMENDATIONS	P.#
REFERENCES.....	P.#
GLOSSARY (optional)	P.#
APPENDICES	P.#
A. MISSION AND ORGANIZATION OF THE SPONSORING AGENCY	P.#
B.	P.#
C.	P.#

* This page is required for all group projects. It identifies which student holds primary responsibility for each section of the report.

Format for Letter of Transmittal

(Business letter format, written to agency liaison)

The Letter of Transmittal is a letter formally submitting the project report to the agency involved. A sample letter of transmittal is given below. The letter must contain the title of the report and include the following sentences:

“Copies of this report are being submitted simultaneously to (faculty advisors) for evaluation”.

“Upon faculty review, the original will be catalogued electronically in the Gordon Library of Worcester Polytechnic Institute”.

The letter should close with a statement that thanks the liaison for his or her help.

Sample Letter

[Date of letter]

Mr. Louis C. Rogers, Director
Office of Environment
U.S. Fish and Wildlife Service
Washington, DC 00901

Dear Mr. Rogers:

Enclosed is our report entitled The Impact of the Fisheries Industry on Coastal Waters. It was written at the U. S. Fish and Wildlife Service during the period August 26 through October 12, 1990. Preliminary work was completed in Worcester, Massachusetts, prior to our arrival in Puerto Rico. Copies of this report are simultaneously being submitted to Prof. Susan Vernon-Gerstenfeld and Professors Rivera and Demetry for evaluation. Upon faculty review, the original copy of this report will be catalogued electronically in the Gordon Library at Worcester Polytechnic Institute. We appreciate the time that you and Mr. David Langston have devoted to us.

Sincerely,

[Your names in alphabetical order]

Example Title Page

REPORT TITLE IN CAPITAL LETTERS

Interactive Qualifying Project Report completed in partial fulfillment
of the Bachelor of Science degree at
Worcester Polytechnic Institute, Worcester, MA

Submitted to:

Professor _____ (advisor)

Professor _____ (co-advisor)

In Cooperation With

(names and titles of agency liaison)

(name of agency and division)

(typed names)

(signatures)

(Date of submission)

Advisor Signature

Co-advisor Signature

Abstract

The Abstract is of prime importance since it is used by readers for guidance about the subject, treatment and results. Often the quality of the Abstract will determine how much attention a decision-maker will devote to the rest of the report. Therefore, the Abstract must summarize the contents briefly and accurately, and be understandable independent of the text. It should contain no equations, figures or illustrations, and you should aim for no more than 80 words. The Abstract must contain the name of the organization with which you worked. It might begin, for example: "This report, prepared for the U. S. Department of Commerce...". The Abstract must be single-spaced. **This abstract, after revisions by the faculty advisors if necessary, will appear on your transcript.**

Acknowledgements

Students often insert an acknowledgment page if they wish to specifically acknowledge the assistance or involvement of particular people, such as liaisons or advisors.

Authorship Page

When a single, comprehensive written report is submitted for a project, each individual's contribution to the group effort must be clearly identified. The authorship page is either a simple list of individual chapters and their respective authors or is a statement in which each contributing group member is named as having carried out one or more specific tasks within the overall project effort.

Table of Contents

You should develop the Table of Contents early in the formulation of the report. It can serve as the basic outline of the paper.

List of Tables and Figures

List titles of each with page numbers where they appear in the report

Executive Summary

An executive summary is an extended abstract. **It concisely and completely summarizes the entire project in 3-5 pages.** It contains: an introduction (including problem statement and project goals and objectives); a description of the major methodologies used; the main results and analyses; and the major conclusions and recommendations.

Very often it is the only part of the report that is read. This includes your sponsors. If you are interested in submitting your project for the President's IQP Competition, you should know that the only document used during the first round of vetting is the Executive Summary.

Introduction

The Introduction should contain a section on the significance of the subject matter. It usually runs about 2 to 3 pages in length and describes in general terms what the reader will read in the body of the report. [The subject/problem, project goals, and objectives, importance, methods, and anticipated form of the results and conclusions for the project should all be touched upon.] The five rhetorical moves used in your project proposal should also be used here with some elaboration to include results and conclusions.

Literature Review / Background

Usually, a project topic will deal with several areas of knowledge. The literature review is a discussion of the theoretical background of your topic and current and past research performed in the relevant area. It provides the reader with the information necessary to understand your topic. It also leads the reader to understand how and why you formulated the problem in the way you did. Your project is intended to fill a gap in knowledge and/or add to the store of knowledge in the subject area. In some cases, when a project results in a product such as a videotape, for example, the literature review created the rationale for creating the product, which, in turn, will be used as a tool for actions that in the end will develop knowledge. If your literature review does not clearly provide a rationale for your project, you have not covered your field or you have not conceptualized the problem rationally. Your literature review from your preparation should provide you with a good start. But you are expected to **greatly expand** your own knowledge through new literature sources and to provide the reader with many more sources. Remember, people who have no knowledge in your project area may look at your report in Gordon Library. Your literature review should enable them to understand the basics in your topic area, the rationale for your methodology, the data you discuss, and your conclusions and recommendations. Remember to focus on points not on particular authors or sources, unless they are seminal works in the field that are so commonly recognized that the name of the author or work is immediately recognized. You should compare and contrast different perspectives, theories and points of view on each topic you discuss. There is almost never complete agreement among the experts

Follow the referencing format prescribed by your advisor.

Methodology

This chapter, one of the most important in the report, must present your methods of analysis in a way that will allow the reader to replicate your efforts with a different sample. The Procedure or Methodology is the general, conceptual flowchart of the problem-solving approach. You must provide a rationale for all procedures you elect. If for example, you plan to conduct interviews, you must tell why you chose to conduct unstructured versus structured interviews. If you sent out questionnaires, why did you do so? Justify the type and size of your interview sample or your questionnaire sample. We recommend that you organize your discussion of methods around the achievement of project objectives.

Many projects do not lend themselves to quantification. However, you will discuss, for example, why you chose to do open-ended interviews, focus groups, content analysis, system dynamics modeling or document research or observation techniques or historical research or other procedures for data collection not named here. Whatever methodologies you use should be discussed in detail. You should clearly explain the rationale for your choices, including the alternate methodologies you did not choose and why. For example, how many people were involved in your focus groups and why did you choose that number and that sample? How did you train the leaders to insure uniformity across groups? How did you record the information and organize it so that you could analyze it conceptually? How did you find the documents you needed when you did document research? What were the obstacles and what compromises did you have to make regarding the data in the process of collection? These are but a few of the sorts of questions you should address.

Many projects will not require statistical analysis. However, if your project did require statistical analysis, why did you choose one statistical procedure over another? What were the difficulties in choosing your sample? How did you pre-test your interview questions or your questionnaire? What were the time, money, geographic and human resource constraints? If you did not choose a random sample, why didn't you? If you stratified your sample, why did you stratify it that way?

In conducting your work, you may have had to modify the procedures you first intended to use. Explain what modifications you made and why. Hunches, even based on interviews, cannot be reported unless they are backed by data that have been analyzed systematically, if not statistically. Systematic analysis requires organizing data according to criteria set up in advance. Usually systematic analysis means numbers are involved.

Results and Discussion / Analysis

This chapter contains the presentation, discussion and analysis of the findings of your investigations. Start with the simplest material, but be specific. Your reporting and any arguments you make will be infinitely stronger if you use, whenever possible, tabulations of the findings. An example is, "Six out of twenty people interviewed wanted the airport to be transferred to private ownership". Proceed to more complicated reporting. "In spite of the fact that so few people were in favor of private ownership, the majority - 18 out of 20 - felt that private ownership would result in more efficient service for passengers". However, not all projects will lend themselves to this sort of reporting. Discuss the format of the presentation with your advisor(s) early in the project. As with your Methodology chapter, organizing this chapter around your project objectives will provide a useful structure.

Tables may be used when doing so **supplements** but does not simply duplicate the text. Refer to the table-- "Table 2 below discusses....."-- then insert it in the text. Tell the reader what to look for in the table, but discuss only the highlights. Do not use a table to take the place of text. Never include a table or figure that is not discussed in the text.

Each table should be numbered and have a name. For example, the first table might be labeled as:

Table 4.1 Engineers by Field

(Table is inserted here)

Source: Author's last name, year of publication, p. number(s)

Readers should be able to understand the table without explanation. Have others who are not in your team look at your tables and tell you what they mean. If the reader does not understand the table, revise it. Refer to the table by number: "High school students are more informed about the tasks of mechanical engineers than they are about those of electrical engineers (See Table 4.2)", for example; or "Table 4.2 shows the number of manufacturing plants that"

Your analysis should focus on the significance of patterns you discern in your data. Hence, you will be able to say, "Seven out of the nine people indicated a preference for Classic Coca-Cola, suggesting a trend." Or, "Since only four out of nine people believed the regulations should be changed, we cannot justify a recommendation to change the regulations. Nevertheless, our sample was so small that we cannot conclusively state that our findings constitute an adequate picture of the opinions of the total population from which the sample was drawn".

Remember that your samples will usually not be large enough to allow you to make statements about cause and effect. In order to do so, you would have had to use a classic experimental design in which you controlled for all variables except the ones you wished to test. You would, also, have had to use a large sample. Hence, while always referring back to your sample size for justification, you can talk only about trends and about their strength. Provide the reader with alternate explanations for the outcomes of your data. When the majority of adopters of solar equipment are between the ages of 30 and 50, it may not be because older people do not like or believe in solar equipment as an energy saver, but because older people may have less access to media sources from which they can learn about solar equipment than younger consumers. They, also, may have lower incomes than the younger group and, therefore, cannot afford solar equipment, for example. **Do not reject data you feel will not support your hypotheses or that will not please your agency. As researchers you have an obligation to report and analyze all relevant data. Finding lack of support for a theory or stating that the evidence is inconclusive is always as important as supporting a theory.**

Conclusions

Be sure that all your conclusions are consistent with and follow from an analysis of your data. Everything in this chapter must grow logically from what you have presented in earlier sections.

Recommendations

The chapter indicates what policy or other recommendations you are making. Recommendations must follow from conclusions, which follow from your analysis, which follow from your data, which follow from your methodology, which follow from your hypotheses, which follow from your discussion of background material including discussion of theories.

While recommendations grow logically from your investigation, they do not necessarily grow logically from the opinions of agency personnel or from the political climate of an agency. Upon occasion, recommendations may be contrary to what an agency may wish to hear. This is a delicate situation and will require tact on your part. Discuss controversial findings and recommendations with your liaison and advisors, but be true to your data and your analysis. Conclusions and Recommendations are often combined into one chapter.

Mission and Organization (of Agency) - Appendix A

This Appendix should include a general background statement on the history and development of the agency or organization, recent budgetary trends, how and by whom its policy is set, and a specific statement of current mission, policies, goals and objectives. The final section should describe how your project topic is related to the agency's mission, the position and responsibilities of the people working with you in the agency—show an organization chart, and how the project topic relates to different components of the organization.

References

Use the American Psychological Association [APA] Publication Manual as your guide, or a standard format provided by your advisor.

Supplementary guidelines for final report:

For report format, please refer to the Registrar's guidelines.

DOUBLE SPACE all sections of your final report, EXCEPT:

- the ABSTRACT
- indicated sections of the Title Page
- Quotations, References, Illustrations, Footnotes, and other items that are normally single-spaced.

Be consistent in footnote style, if footnotes are used. If in doubt, consult your advisor.

Supplementary guidelines for illustrations

- Graphs, charts, and other illustrations are normally referred to as Figures. Tables are referred to as such.
- If an illustration takes up 1/2 page or more, give it its own page. Place the illustration as closely as possible to the section of the text to which it refers.
- If a single figure is more than 2 pages long, include it as an appendix to the report.
- If the figure is taken from or is a modification from an outside source, credit that source using APA format.

Source: Statistical Abstract of the U.S., 1966, p. 23; or, Adapted from Statistical Abstract of the U.S., 1966, p. 25.

- This sort of reference appears below the figure. Do not use a figure if it is not referred to in your text.

Below is an example of a table:

Table I - 1. Fruit Grown in Massachusetts

(Given by town in percent of total yield of fruit in state)

	Leominster	Cambridge	Springfield
Apples	10.0	0.05	6.0
Oranges	3.0	0.01	0.0
Plums	2.0	3.00	17.0

Source: Adapted from the U.S. Department of Agriculture, July 1990, p.10.

Please note, however, that the title of a figure always appears below the figure, not above it.