

GUIDE BOOK

RESEARCH PROPOSAL AND DISSERTATION WRITING



FACULTY OF FORESTRY, GADJAH MADA UNIVERSITY
YOGYAKARTA
2021

GUIDEBOOK FOR WRITING RESEARCH AND DISSERTATION PROPOSALS

Author : Dr. Hero Marhaento, Dr. Fanny Hidayati,
Dr. Yeni Widiana Nurchahyani Ratnaningrum, Dr.
Dwiko Budi Permadi, Dr. M. Taufik Tri Hermawan,
Dr. Ari Susanti, Dr. Ragil Widyorini

Editors: Dr. Sigit Sunarta and Dr. Muhammad Navis Rofii Editors:
Prof. Dr. Suryo Hardiwinoto,
Prof. Dr. Mohammad Na'iem,
Dr. Eny Faridah

Skin and content design : Riyono Nugroho

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FOREWORD

Praise be to Allah SWT for His abundance of grace and guidance so that this book "Guidelines for Writing Research and Dissertation Proposals" in the Doctor of Forestry Science Study Program, Faculty of Forestry, Universitas Gadjah Mada can be published.

As a guidebook, it is hoped that this book can inform and explain thoroughly about how to write research proposals and dissertations correctly, according to the provisions that apply to the Forestry Science Doctoral Study Program.

As a general guide, this book gives each promoter team of the study interest the freedom to develop the format and structure of dissertation writing that has not been included in this guide.

It is hoped that with this guidebook, students of the Forestry Science Doctoral Study Program can complete their studies on time and produce quality dissertation work.

Yogyakarta, May

2021 Writing

Team

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CHAPTER I

RESEARCH PROPOSAL



Before conducting a research project for a dissertation, students prepare a dissertation research proposal. The proposal contains a brief, concise and clear description of the background, research objectives, conceptual framework and research methods accompanied by a review of the results of previous research (both by the researcher himself and other researchers) on similar problems, as well as finding aspects of novelty in related science. In general, a dissertation research proposal consists of: the initial part, the main part, and the final part. The explanation of each part is presented in the following subchapters.

The number of pages of the research proposal is limited to no more than 30 pages with Times New Roman font, size 12, and 1.5 spaces. The research proposal is neatly bound with a green cover.

A. Initial Section

The Preliminary Section includes a title page and an approval page.

1. Title page

The title page contains the title of the research, the purpose of the research proposal, UGM symbol, student name and number, study program and faculty, and submission time.

a. The title of the research is made in a short and clear statement sentence, and is



capable of

describes the overall content and activities of the research being conducted. The title of the research is written in standardized sentences that do not open up opportunities for diverse interpretations, with no more than 20 words.

- b. *The purpose of the research proposal* is "to prepare a Doctoral Dissertation in the Forestry Science Doctoral Study Program, Faculty of Forestry, Universitas Gadjah Mada".
- c. The official logo of *Universitas Gadjah Mada* with a diameter of 5.5 cm.
- d. *The student's name* is written in full and without a degree. Below the name is the student number.
- e. *The name of the study program* is "Forestry Science Doctoral Study Program, Faculty of Forestry, Universitas Gadjah Mada, Yogyakarta".
- f. *The time of submission* is indicated by writing the month and year under point e.

An example of the title page of the research proposal is shown in Appendix 1.

2. Endorsement page

This endorsement page contains the title of the research proposal, the name of the proposing student and the approval of the main supervisor (promoter), co-supervisor (co-



promoter), and study program manager,
accompanied by the signatures and

submission date.

An example of the research proposal ratification page is presented in Appendix 2.

B. Main Section

The main part of the research proposal includes an introduction, literature review, research methods, and timeline for completing the doctoral program.

1. Introduction

The introduction chapter contains the background, objectives, and benefits of the research.

a. The background contains the formulation of the problem, the originality of the research, and the *novelty* of the research.

a.1. The formulation of the problem contains a brief, concise and clear description of the main problems related to the research topic, as well as the reasons that make the problems raised in the research proposal interesting, important, and need to be researched. The formulation of the problem must link the topic of the dissertation research proposal with previous research topics clearly by including the referenced literature.

a.2. The originality of the research shows that the research conducted is different from previous studies; the problem faced has never been solved or is new.



partially solved by previous researchers; or has been solved but requires a more detailed solution. The originality of this research also indicates the position of the proposed research on the researcher's *road map* by referring to the literature.

a.3. *The novelty of the research is expressed by conveying new findings that will be obtained from the proposed research, which are different from the findings of previous research. These findings can be in the form of data, products, methods, or recommendations. The description of the novelty of this research can be conveyed by referring to the literature.*

b. *Research objectives contain a statement of the formulation of knowledge that will be obtained by conducting research to solve the research problem described in the previous point. The research proposal may contain general research objectives and specific research objectives that elaborate on the general research objectives. Each specific research objective will be discussed in detail in the following chapters, and each chapter can lead to a publication paper. The research objectives can be translated into research questions related to the research problem.*

- c. *The benefits of the research* explain the benefits or contributions of the research results for theoretical, policy, and practical interests in the field of forestry and or for the development of the nation and state.

2. Literature review and theoretical foundation

a. Literature Review

The literature review contains a critical review of previous research results from scientific journals, textbooks, proceedings, encyclopedias, dictionaries, research reports that are referred to and presented systematically related to the research to be carried out. In presenting the literature review, it needs to be shown that the problems to be studied have not been answered, and/or have only been partially answered. In addition, it is also necessary to clearly convey the position of this research in a series of long-term research to solve these problems and must emphasize the parts of the problem that will be solved in this research.

Literature in the form of articles from the internet can also be used as a source of literature if the article is published on the official website of a government agency or a credible educational / research / scientific study center. Handouts or learning materials and the author's opinion in the blog



and mass media cannot be used as literature sources. This literature review chapter is not just a collection of citations, but contains analysis for the synthesis of the proposed research. Students are not advised to quote theories from Thesis, Thesis, and Dissertation, but to refer from relevant primary literature sources (e.g. journal articles, proceedings, review articles) and preferably those published within the last 10 years. The literature review chapter can be published as a *review* article.

b. Theoretical Foundation

The theoretical foundation contains a theoretical framework or conceptual framework abstracted from the literature review and compiled by students themselves as a guide to solving research problems. The theoretical foundation can take the form of qualitative descriptions, mathematical models, or equations that are directly related to the field of science under study. If a hypothesis is required - for example in basic research, then the theoretical basis is used to formulate a hypothesis (deduction). Hypotheses contain brief statements deduced from the literature review and/or theoretical basis; are temporary answers to the problem at hand; and must still be proven correct through research methods. In certain scientific fields, the theoretical basis is used as the basis for

the following



in preparing a framework that contains a description of the flow of research and the variables to be studied, which is compiled in its own sentences without including references. The framework can be completed with a flowchart or picture.

3. Research method

The research method contains a technical research framework to answer the research objectives formulated in the initial section using both qualitative and quantitative approaches. Quantitative research can be divided into research that is 1) experimental (both on a laboratory scale and field scale) by imposing certain treatments on the object of research, and 2) without experiments known as survey research. A research proposal can use one or more research methodologies depending on the characteristics of the problem and the research objectives.

a. Experimental Research

Experiment-based research methods, both in the laboratory and the field, include descriptions of research materials or materials, research variables, tools used, research design or design, research procedures, and analysis of results.



a.1. The research location explains where the research was conducted or where the research materials were collected, a description of the location, and the reasons for choosing the location. The description of the research location can be supplemented with maps, pictures or tables.

a.2. Research materials or materials can be various levels of organisms ranging from genetic material, species, populations, communities, ecosystems, to landscapes (e.g. watersheds), biotic samples (plants, animals, and humans), and abiotic samples (soil, host rock, water). Research materials can also be secondary data owned by other parties. Research materials must be described in detail along with their properties or specifications.

a.3. Research variables or parameters are properties or objects whose values vary and will be studied, observed or measured in research, through measurements that have been determined within the framework of the research methods used. Research variables or parameters can take the form of quantitative or qualitative data.

a.4. The tools used to conduct the research, including for collecting and analyzing data, should be clearly described and if necessary



accompanied by pictures, charts and/or descriptions.



a.5. The research design contains a detailed description of the variables and parameters to be studied. The variables to be counted/observed and the parameter data to be collected are clearly described, including their type and range.

a.6. Research procedures contain detailed descriptions of how to conduct research and collect data. The data collected must have good data quality, the result of observations and data collection with methods and measuring instruments that have been tested and trusted. The description of this research method can be conveyed by referring to the literature. If necessary, the research method is presented with pictures, flow charts and/or captions.

a.7. Analysis of results includes a description of the model and how to analyze the research data.

b. Survey Research Methods

Survey research methods are described at least about the location and time of research, types of data, operational definitions, population and samples, research instruments, survey implementation procedures, and data analysis.

b.1. The location and time of the research explains where and when the survey was conducted or where the research material was taken along with the reason



selection of the research site. The description of the research location may be supplemented with maps, images, or tables.

b.2. The types of data are primary and secondary data containing research variables that will be collected through surveys of both humans and nature. Research materials or materials can also be secondary data collected from other sources. The variables include dependent variables and independent variables.

b.3. An operational definition that contains the operational limits of the variables to be measured, calculated, or observed behavior.

b.4. Population and sample describe the characteristics of the population to be studied, both in the form of humans and animals and state the boundaries of population units and sample units. The sampling technique to be selected is explained clearly and briefly based on the level of statistical accuracy, cost and time available. The choice of sampling technique (*probability* or *non-probability sampling*) must be accompanied by clear reasons in accordance with the characteristics of the population at hand.

b.5. Research instruments describe tools, *tally sheets*, or questionnaires that have been standardized especially in primary data collection.



b.6. The survey implementation procedure explains the stages of implementing the survey in the field starting from how the initial data collection is carried out, interactions with data sources, and how to deal with obstacles encountered in the field.

b.7. Data analysis explains how the data that has been collected is managed, stored and analyzed both descriptively and with more sophisticated statistical analysis, accompanied by an explanation of the data processing software used.

Qualitative research methods have a variety of approaches, such as case studies, ethnography, document/text ^{studies}¹, and natural observation. The choice of qualitative research methods must state clear reasons according to the formulation of the problem and the objectives of the research. In its technical design, qualitative research needs to describe the following things: location and time of research, type of data, data sources, data collection techniques, research instruments, implementation procedures and data analysis. In this part of the research method, it is necessary

¹Document ^{study} as part of the *research* process is conducted for both qualitative and quantitative *research* to formulate *research gaps*. Document/text study as a research methodology refers to documents/texts as research sources to be analyzed and interpreted systematically to form information to answer the formulation of research



objectives/problems.



It also explains the data triangulation method to reduce subjectivity bias, which includes a variety of data sources and data collection techniques as verification tools.

4. Research schedule

The research schedule includes the stages of research and details of activities at each stage along with the time (in units of months) needed to carry out each stage until the completion of the dissertation. The research schedule can be presented in the form of a matrix (table) or description. The research schedule includes activities to attend seminars, conferences, and workshops with the aim of improving skills and improvements in the preparation of the dissertation.

C. Final Section

The final section consists of a bibliography and appendices.

1. Bibliography

The bibliography only contains literature referred to in the research proposal and is arranged downward alphabetically by surname or last name of the first author. In general, writing a bibliography of various sources of literature can be written as follows:

- a. Book: author's name, year of publication, book title, volume, issue to, number, pages referred to (unless it is the whole book), city: publisher's name.



- b. Scientific journals: author's name, year of publication, title of the article, name of the journal with its official abbreviation, volume, and page number referred to.
- c. Internet: author name, year of last revision, article title, website/http, date of last revision, date accessed.
- d. Other sources, such as personal communication (interviews, correspondence) are organized according to the requirements of the field of study/discipline concerned.

Writing a bibliography between fields of science can be different. One that is often used is writing a bibliography in the style (*output style*) according to the American Psychological Association (APA). To facilitate the writing of the bibliography, students can use *reference manager* applications such as EndNote, Mendeley, Zotero, and others. An example of writing a bibliography according to APA style is contained in Appendix 3.

2. Attachment

The appendices include information needed for the research plan, such as questionnaires and maps. If necessary, the appendix may include a budget plan for the research and the source of funds to be used.



CHAPTER II

DISSERTATION WRITING



Dissertation writing is made to formulate and convey research results systematically, briefly and clearly, which includes background, research objectives, framework, research methods, results and analysis of research results, discussion, and conclusions. In general, dissertation writing consists of the initial part, the main part, and the final part. The explanation of each part is presented in the following sub-chapters.

A. Initial Section

The initial part includes the front cover page, title page, endorsement page, statement page, preface, table of contents, list of tables, list of figures, list of appendices, meaning of symbols and abbreviations, digest, *abstract*, and UGM logo.

1. Dissertation Front Cover Page

The front cover page of the dissertation contains the title of the dissertation, the logo of Universitas Gadjah Mada, the name and number of the student, the name of the study program, and the year of completion of the dissertation.

- a. *The dissertation title is in accordance with the research proposal. If there is a change in title from the research proposal, the number of words in the new title still does not exceed 20 words.*
- b. The official logo of *Universitas Gadjah Mada* with a diameter of 5.5 cm.



- c. *The student's name is written in full and without a degree. Below the name is the student number.*
- d. *The name of the study program is the Forestry Science Doctoral Study Program, Faculty of Forestry, Universitas Gadjah Mada, Yogyakarta.*
- e. *The year of dissertation completion is the year in which the judgement is held.*

An example of the front cover page of the dissertation can be seen in Appendix 4.

2. Title page

The title page contains the same writing as the front cover page of the dissertation, but at the bottom of the title the purpose of the dissertation is added, namely "to fulfill some of the requirements to achieve the S-3 degree in Forestry Science".

3. Endorsement page

This page contains the title of the dissertation, the full name of the student, the date of the examination, as well as the approval of the Supervisory Team, the Examination Team, the Study Program Manager, and the Dean of the Faculty of Forestry; complete with signatures and examination dates. An example of a dissertation approval page is presented in Appendix 5.

4. Statement page

This page contains a statement that the content of the dissertation is not the result of plagiarism or the work



of others. An example of a statement page is in Appendix 6.



5. Preface.

The Foreword contains a brief description of the purpose of the dissertation, a brief explanation of the dissertation content, and acknowledgments. If necessary, acknowledgments can be written on a separate sheet.

6. Table of contents

The table of contents contains a sequence of chapter titles and subchapter titles along with their page numbers. The table of contents is intended to provide a comprehensive overview of the contents of the dissertation, and can be a guide for readers in finding a chapter or sub-chapter.

7. Table list

The table list contains a sequence of table titles and their page numbers.

8. List of images

The list of images contains the sequence of image titles along with their page numbers.

9. List of attachments

The list of appendices contains a sequence of figure titles and their page numbers.

10. Glossary of terms, symbols and abbreviations

If there are many specific terms, symbols and abbreviations in the writing, the meaning of these terms, symbols and abbreviations needs to be explained briefly.

11. Digest and abstract

The digest is written in Indonesian, while



The abstract is written in English. Both contain a brief description of the research objectives, methods, and results. In general, the digest and *abstract* are composed of a maximum of three paragraphs, no more than 1 page in length, the number of words ranges from 500 - 750 words, typed single-spaced, and equipped with a maximum of five keywords.

B. Main Section

The main part of the dissertation includes Introduction, Literature Review, Research Methods, Research Results, Discussion, and Conclusions and Suggestions. In the writing, there are two (2) kinds of dissertation writing structures, namely monograph type and *chapter-based* type. The following are examples of writing structures with both types

TYPE I: MONOGRAP

1. Introduction
2. Literature Review and Theoretical Foundations
3. Research Methods
4. Research Results
5. Discussion

Note: the research results and discussion can be combined in one chapter, according to the b u t u r e s i d e n t s o f t h e supervisor.

6. Conclusions and Suggestions
Notes: Suggestions are not mandatory, depending on the nature of the research.
7. Bibliography
8. *Summary* (maximum 10 pages)
9. Attachment
 - a. Data/questionnaires/analysis results/supporting photos/maps, and other information used in the research.
 - b. Journal manuscripts (*submitted/ in review/ published*)
10. Short CV of Doctoral candidate (promovendus)

TYPE II: *CHAPTER-BASED*

1. Introduction
2. Literature Review and Theoretical Foundations
3. General Research Methods
4. Chapter: Objective 1 (may lead to 1 publication)
 - a. Introduction
 - b. Methods
 - c. Results and Discussion
 - d. Conclusions and Suggestions
5. Chapter: Objective 2 (may lead to 1 publication)
 - a. Introduction
 - b. Methods
 - c. Results and Discussion



- d. Conclusions and Suggestions
- 6. Chapter: Objective 3 (may lead to 1 publication)
 - a. Introduction
 - b. Methods
 - c. Results and Discussion
 - d. Conclusions and Suggestions
- 7. The next chapter, adjusted to the dissertation material
- 8. Discussion
- 9. Conclusions and Suggestions
 - Notes: Suggestions are not mandatory, depending on the nature of the research.
- 10. Bibliography
- 11. *Summary* (max 10 pages)
- 12. Attachment
 - a. Data/questionnaires/analysis results/supporting photos/maps, and other information used in the research.
 - b. Journal manuscript (submitted/published)
- 13. Brief CV of the Doctoral candidate (promovendus).

Despite the different styles of dissertation writing structures, the components of each dissertation are relatively the same. The following is an explanation of each of these dissertation components.

1. Introduction

The Introduction includes the Background, Objectives, and Benefits of the Research.

a. *The background* contains the formulation of the problem and the originality of the research.

a.1. *The formulation of the problem* is structured as in the research proposal, but deepened according to the needs of the dissertation. In the dissertation problem formulation section, it is possible to change and or add literature from the research proposal.

a.2. *The originality of the research* is arranged as in the research proposal, but it is deepened according to the needs of the dissertation. In the originality section of dissertation research, it is possible to change and or add literature from the research proposal.

a.3. *The novelty of the research* is structured as in the research proposal, but deepened according to the needs of the dissertation. In the dissertation research novelty section, it is possible to change and or add literature from the research proposal.

b. *The research objectives* are structured as in the research proposal. In the dissertation research objectives section, it is possible for changes and / or additions to the research proposal.



c. *The benefits of research* are organized as well as in

research proposal by containing the benefits or contributions of the dissertation to science, the development of the State and Nation, as well as related policies and or the wider community.

2. Literature review

The literature review is organized as in the research proposal. The *style of writing citations and bibliography* is done with the *American Psychological Association (APA)*, as exemplified in Appendix 3. The literature review section may also contain theoretical foundations / frameworks and hypotheses.

- a. *The theoretical foundation / frame of mind* is extracted from the literature review and compiled by students themselves as a guide to solving research problems and to formulate hypotheses. The theoretical foundation can take the form of qualitative descriptions, mathematical models, or equations that are directly related to the field of science under study.
- b. *Hypotheses (if any)* contain brief statements deduced from the literature review and/or theoretical basis; are temporary answers to the problem at hand; and still have to be proven.

3. Research method

The research method is organized like the research proposal, but deepened as needed.



dissertation. In general, research methods include descriptions of research materials or materials, data to be collected, tools, research design or design, and analysis of results carried out in the implementation of research.

- a. *Research materials or materials* are organized as well as research proposals, but are deepened according to the needs of the dissertation.
- b. The *tools* used to carry out the research should be described in the same way as the research proposal, but deepened according to the needs of the dissertation.
- c. *The research design* is structured like a research proposal, but deepened according to the needs of the dissertation.
- d. *The research method* is organized like a research proposal, but deepened according to the needs of the dissertation.
- e. *The analysis of results* is structured in the same way as the research proposal, but deepened according to the needs of the dissertation.

For dissertations with a research chapter-based type, methods are divided into general methods as a separate chapter and specific methods described in each chapter. Specialized methods are methods that are only performed and written about in the respective chapter.

4. Results and analysis of research results

This chapter contains the results and analysis of the research results which are integrated and comprehensive. Research results



Research results can be presented in the form of lists (tables), graphs, photos/images, flow charts and/or other forms. The research results must answer the research questions and are arranged in the order of the research questions/hypotheses. If necessary, the research results can be divided into several sub-chapters to make it easier to understand.

Analysis of the research results in the form of analysis is presented following the research results, and cannot be separated into separate subchapters. The analysis of the results is placed as close as possible to the results in each sub chapter, to make it easier for readers to follow the description of the results.

For *chapter-based* dissertations, the results are presented in each chapter that corresponds to the research material.

5. Discussion

The discussion is a detailed description of the results obtained, in the form of theoretical explanations delivered qualitatively, quantitatively and/or statistically. After describing the results of the research, the discussion needs to be expanded by comparing these results with the results of previous studies, so as to bring out the *novelty* aspect of the research.

For dissertations with a research chapter-based type, the discussion is written in two forms, the first

form is the discussion presented in each chapter.



The second form is a general discussion which is a separate chapter.

6. Conclusions and Recommendations/Suggestions

Conclusions and recommendations are stated separately and presented in different subchapters.

- a. The *conclusion* is a brief and precise statement summarized from the results of the research and discussion, to answer the objectives and research questions or hypotheses formulated at the beginning.
- b. *Recommendations* or *Suggestions* are made based on the author's judgment with reference to the research results. Recommendations are addressed to researchers in similar fields and related parties within the scope of the research. Recommendations can take the form of steps that need to be taken to follow up on the research results. In addition to recommendations, suggestions can also be made, which can be in the form of information about parts of the research that have not been fully resolved and/or still need to be answered; parts of the research that still need to be continued; treatments that might be added; and/or forms of development or modification of the completed research.

C. Final Section

The final section contains a bibliography, summary, *summary* and appendices.

1. Bibliography

As in the research proposal, the writing of the bibliography can differ between fields of science. One that is often used is the writing of a bibliography in the style (*output style*) according to the American Psychological Association (APA). To facilitate the writing of the bibliography, students can use *reference manager* applications such as EndNote, Mendeley, Zotero, and others. An example of writing a bibliography according to APA style is in Appendix 3.

2. Summary and Summary

The summary is written in Bahasa Indonesia and the *summary* is written in English. The *summary* and *digest* should be a maximum of 10 pages each. The *summary*, which is broader than the *digest*, contains a complete description of the introduction (background, scientific questions and research objectives), methods used, summary of research results, summary of general discussion, conclusions and recommendations. An example of writing a *summary* is in Appendix 9.

3. Attachment

As with the research proposal, appendices are used to place data or information



The appendix may also contain published research articles, either with submitted, reviewed, or published status in scientific journals, and or conferences. The appendix can also contain published research articles, either with the status of submit, in-review, or published in scientific journals, and or conferences.



CHAPTER III

WRITING PROCEDURE



Writing procedures include Materials and Size, Typing, Numbering, Tables and Figures, Language, Writing Names and Bottom Notes.

A. Material and Size

Materials and sizes include manuscript, cover, cover color, and paper size.

1. Manuscript

Manuscripts are typed on A4 HVS 80 gr paper and are not back-to-back.

2. Cover

The cover is printed on light green Bufalo or similar paper, and wherever possible is reinforced with cardboard and covered with plastic. The text printed on the cover is the same as that on the title page, with an example provided in Appendix 1.

3. Cover Color

The cover color is light green.

4. Paper Size

The paper size is 21 cm x 29.7 cm (A4).

B. Typing

Typing includes fonts, numbers and units, line spacing, margins, filling in space, new paragraphs, sentence beginnings, headings and subheadings, downward detailing, and symmetry.



1. Typeface

- a. The manuscript is typed in Times New Roman font size 12, and the same font must be used throughout. The use of italic or square typeface is not permitted, except on the dedication page and motto (if any).
- b. The use of italics can be used for specific purposes such as foreign terms and botanical names.
- c. Any symbols, Greek letters, or signs that cannot be typed (not in the software) should be neatly written in black ink.

2. Numbers and units

- a. Numbers are typed with numbers, except at the beginning of a sentence, for example "... using 10 g of material". For the beginning of a sentence, numbers are typed with letters, e.g. "Ten samples were selected from each population..."
- b. Decimal numbers are marked with a comma instead of a period, e.g. "the weight of the sample was 50.5 g".
- c. Units are expressed with their official abbreviations without periods, such as m, g, kg, and cal.

3. Line spacing

The distance between 2 lines is made 1.5 spaces. Exceptions apply to digests, direct quotations, table and figure titles that are more than 1 line, and bibliographies,

where the line spacing is 1 space.

4. Edge boundary

The typing boundaries, in terms of the edges of the paper, are set as follows:

- a. Top edge : 4 cm
- b. Bottom edge : 3 cm
- c. Left edge : 4 cm
- d. Right edge : 3 cm.

5. Room filling

The space on the manuscript page must be filled in completely, meaning that typing must be done from the left margin to the right margin, and there is no wasted space. Exceptions are allowed when starting a new paragraph, making equations, lists, figures, subtitles, or special matters.

6. New paragraph

A new paragraph starts at the 6th typing from the left margin or you can use the indentation facility in your writing software.

7. Sentence starters

Numbers, symbols or chemical formulas that begin a sentence should be spelled out or written with letters, for example: Ten tree trunks.

8. Titles, subtitles, subtitles, etc.

- a. *Chapters* should be *centered*, all in capital letters, 4 cm from the top of the page



top edge, without a full stop.

- b. Subchapters, subchapters, and sub-subchapters* are typed starting from the left border with a sentence writing style where the beginning of the sentence uses capital letters, without ending with a period. The first sentence after subchapters, subchapters, and sub-subchapters begins with a new paragraph.

Examples of chapter and subchapter writing, as well as the procedure for writing them, are provided in Appendix 7.

9. Breakdown to the bottom

If the manuscript contains details that must be arranged downward, sequential numbers are used with numbers or letters according to the degree of details. The use of a connecting line (-) placed in front of the details is not permitted.

10. Symmetrical location

Figures, lists (tables), equations, titles and subtitles are written symmetrically to the left and right edges of typing.

C. Numbering

This section is divided into page numbering, tables (lists), figures and equations.

1. Page

- a. The beginning of the dissertation*, starting from the title page to the digest, is numbered with small

Roman numerals.

b. *The main part* and the *final part*, starting from



Introduction (Chapter I) to the last page of the Bibliography, using Arabic numerals as page numbers.

- c. Page numbers are *placed* at the top right, unless there is a title or chapter at the top of the page. For such pages, the number is written at the bottom right. Page numbers are typed at a distance of 3 cm from the right edge and 1.5 cm from the top or bottom edge.

2. List (table)

Lists (tables) are numbered sequentially with Arabic numerals without following the Chapter number.

3. Image

Figures are numbered sequentially with Arabic numerals without following the Chapter number.

4. Equation

Sequence numbers of equations in the form of mathematical formulas, chemical reactions, etc. are written with Arabic numerals in brackets and placed near the right margin.



D. Tables and Figures

1. Table

- a. *The title of the table* begins with the table number and is written with an uppercase prefix, placed symmetrically above the table, single-spaced,

without ending with a period.



- b. *Tables* are displayed symmetrically, not broken, unless they are so long that they cannot be typed on one page. On the continuation page of a table, include the table number and the word "continuation" in parentheses, without a title.
- c. *The columns* are named, and the spacing between columns is well-defined.
- d. *The orientation of the table* should be the same as the text (*portrait*). If the table is wider than the width of the paper, so it must be made to extend the paper (landscape orientation), then the top of the table should be placed on the left side of the paper.
- e. *The top and bottom borders of the table* are demarcated, to separate it from the description in the dissertation manuscript.
- f. *Tables* that are more than 2 pages or need to be folded should be placed in the appendix.

2. Image

- a. *The title of the figure* begins with the figure number and is written with an uppercase prefix, placed symmetrically below the figure, single-spaced, without ending with a period.
- b. *Charts, graphs, maps and photographs* are all called pictures (not differentiated).
- c. *Images* are not allowed to be cut off, they must be on the same page as the title of the image.

- d. *Figure captions* are included in the empty places in the *figure* or under the figure title, not on other pages.
- e. *If there are two or more figures in one title*, the figures are arranged in order, clearly numbered or coded in the figure, and explicitly stated in the title of the figure. One example is, "Figure 1. Three variants of sandalwood flowers in the Gunung Sewu population: large red flower (left), small red flower (center) and large yellow flower (right)".
- f. *Image size* (width and height) should be as proportional, consistent and clear as possible.
- g. *The scale on the graph* should be made to facilitate interpolation or extrapolation. The scale in the drawing can be a photograph of the object placed next to the measuring instrument (ruler, millimeter block) or a written scale added to the drawing.
- h. *Charts and graphs* are clearly drawn in black or colored ink.
- i. *The location of the image* is arranged symmetrically.
- j. *The orientation of the image* should be the same as the text (*portrait*). If the image is wider than the width of the paper, so it must be made to extend the paper (*landscape orientation*), then the top of the image must be placed on the left side of the paper.



k. *Image quality* should be clear, at least 300 dpi.

E. Language

1. Language used

The language used for dissertation writing is standard Indonesian (has a subject and predicate, and to make it more perfect, preferably added with an object and description). With the permission of PSIK-S3, the dissertation can be written in English.

2. Sentence form

Sentence forms do not feature first and second person pronouns (I, me, we, you, us, them and others), but passive voice sentences are made, for example "observations were made at ...", "samples were taken at an altitude of ...". In the acknowledgments in the preface, the pronoun *I* is replaced with the *author*.

3. Term

- a. The terms used are Indonesian or Indonesianized terms.
- b. If foreign terms must be used, they should be written in *italics*.

4. Spelling

Spelling is in accordance with the General Indonesian Spelling Guidelines (PUEBI).

5. Frequent mistakes

- a. *Connecting words*, such as "so", "and",

and "whereas", should not be used to start a sentence.

- b. *Prepositions*, such as "on", should not be placed in front of the subject (it breaks the sentence structure).
- c. *The words* "where" and "of" are often incorrectly used, and are treated exactly like the words "where" and "of" in English.
- d. *The prefixes* "to" and "in" should be distinguished from the prepositions "to" and "at".
- e. *Punctuation* should be used appropriately.

F. Name Writing

This section describes the procedure for writing the author's name referred to in the description, bibliography, names that are more than one name with a hyphen, names followed by abbreviations, and degrees.

1. Author name referenced

Authors whose writings are referred to in the description are only mentioned by their last name, and if there are more than two authors, then only the last name of the first author is listed, followed by *et al* or *et al.* For English-language literature sources with more than one author, the conjunction used is "and" not "*and*".



An example of such writing is:

- a. According to Turnbull (1989),
- b. The root system of dicotyledonous plants (Kramer and Kozlowski, 1979) shows
- c. Gasoline can be made from methanol (Meisel et al., 1976)....

There were 4 people who made the writing in item (c), namely Meisel, S.L., Mc Collough, J.P., Leckthaler, C.H., and Weisz, P.B..

2. Author name in bibliography

In the bibliography, all authors must be listed by name, it is not allowed to only list the name of the first author plus *et al.* or *et al.* only.

Example: Meisel, S.L., Mc Collough, J.P., Leckthaler, C.H., and Weisz, P.B. 1976 Not: Meisel, S.L. *et al.*
or Meisel, S.L. *et al.*

3. Name of more than one author

If the author's name consists of 2 or more words, the writing method is the last name followed by a comma, abbreviated first name, middle name and so on, all of which are given a period; or the last name followed by a comma, first name, middle name, and so on. This method of writing must be consistent throughout the dissertation. Example: Sultan Takdir Alisyahbana is written: Alisyahbana, S.T. or Alisyahbana, Sutan Takdir.

4. Degree of scholarship

Degrees of scholarship are not listed.

G. Underlining, New Terms and Citations

1. Bottom Notes

If not strictly necessary, the use of underlining should be avoided, except for certain fields of study such as Social Sciences. Underlining is written single-spaced.

2. New term

New terms that have not been standardized in the Indonesian language may be used, as long as the use of the term is consistent. When a term is used for the first time, its foreign equivalent should be given (in brackets). If a lot of new terms are used, a glossary of terms should be made on the back page, usually after the Bibliography.

3. Excerpt

Quotations are written in the original language. If more than three lines, the quotation is typed single-spaced, and if less than 3 lines, double-spaced, typed indented, not translated, but allowed to be discussed using the author's own words. Foreign language quotations are italicized.





APPENDIX



Example of front cover page of dissertation proposal

ACACIA HYBRID BREEDING STRATEGY

(*Acacia mangium* x *Acacia auriculiformis*)

Dissertation Research Proposal
to prepare a doctoral dissertation in the Doctor of Forestry
Science Study Program



Submitted by

Sri Sunarti

09/291590/SKT/00076

To

DOCTORAL STUDY PROGRAM IN FORESTRY
SCIENCE, FACULTY OF FORESTRY
GADJAH MADA UNIVERSITY
YOGYAKARTA

JUNE, 2013



Example of Dissertation Proposal endorsement page

DISSERTATION RESEARCH
PROPOSAL RATIFICATION SHEET

SANDALWOOD GENETIC STRUCTURE
(*Santalum album* Linn., SANTALACEAE)
IN GEO AREA GUNUNGKIDUL, GUNUNG SEWU

Submitted by
Yeni Widyana Nurchahyani
Ratnaningrum 12/340066/SKT/00118

Endorsed on

Approved,
Promoter Co-Promoter 1 Co-Promoter 2

.....

Authorize,
Head of Forestry Science Doctoral Study Program

.....
NIP

Appendix 3: How to write a bibliography according to APA Style

The examples presented in this appendix are sourced from the "Guide to the Style of Citation Writing for Scientific Works" by Arif Surahman, UGM Library (http://lib.ugm.ac.id/data/panduan_sitiran.pdf).

Literature source: Online Journal

Author. (Year). Title of Article. Journal Name. Volume. page.

Doi:xxx.xxx.

Example: Kim, C., Mirusmonov, M., Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26, 310-322.

Doi:10.1016/j.chb.2009.10.013

Literature sources: Books

Author. (Year). Book Title (edition). Place of Publication: Publisher

Example: Yuan, P. (1998). Shanghai Jahwa: Liushen Shower Cream (A). In Kumar, S.R. (Ed). *Case Studies in Marketing Management* (pp. 1-11). Dehli: Pearson.

Library resources: Online Book

Author. (Year). Book Title (edition). Place: Publisher. Accessed from URL.

Example: Central Bureau of Statistics. (2013). *Statistics Indonesia 2010*. Jakarta, DKI: Author. Accessed from



http://www.bps.go.id/books/file/1_2345.pdf

Literature sources: Dissertation, Thesis Online

Author. (Year). Title of thesis/dissertation (note). Available from database name. (record number).

Example: Young, R.F. (2007). Crossing boundaries in urban ecology (doctoral dissertation). Available from Proquest Dissertation & Theses Database. (UMI No. 327681).

Library resources: Government Publications Online

Institution. (Year). Title of Publication (publication number). Place: Publisher. Accessed from URL

Example: Indonesian Ministry of Education and Culture. (2011). Ministry of Education Regulation on Internal Audit Unit (Permendiknas No. 47 of 2011). Jakarta, DKI: Author. Accessed from <http://spi.um.ac.id/uploads/...SPI.pdf>



Example of Dissertation Front Cover Page

ACACIA HYBRID BREEDING STRATEGY

(*Acacia mangium* x *Acacia auriculiformis*)

Dissertation

To Fulfill Part of the Requirements to Achieve
the Degree of Bachelor of Forestry Science S-



3

Submitted by

Sri Sunarti

09/291590/SKT/00076

To

DOCTORAL STUDY PROGRAM IN FORESTRY

SCIENCE, FACULTY OF FORESTRY

GADJAH MADA UNIVERSITY

YOGYAKARTA

2013

Example of Dissertation Endorsement Page

DISERTATION
ACACIA HYBRID BREEDING STRATEGY
(*Acacia mangium* x *Acacia auriculiformis*)

Prepared and compiled by Sri
Sunarti 09/291590/SKT/00076

has been defended in front of the Board of
Examiners on the date

Board of Examiners

Promoter	Chairman of the Board of Examiners
..... Co- Promoter 1 Examiner 1
..... Co-Promoter 2 Examiner 2
..... Examiner 3
 Examiner 4
 Examiner 5

This dissertation has been accepted as one of the requirements
to obtain a Doctoral degree (Dr.).
Date

Dean of the Faculty of Forestry

Head of the Forestry
Science Doctoral
Study Program

.....

.....



NIP:

NIP:



Example of Statement Page

STATEMENT

I hereby declare that in this dissertation there is no work that has ever been submitted for a degree in a university, and to the best of my knowledge there is also no work or opinion that has been written or published by other people, except those that are written referred to in this manuscript and mentioned in the bibliography.

Yogyakarta,

.....

Signature and full name



Example of Writing Title, Sub Title, etc.

CHAPTER II. LITERATURE REVIEW

(Chapter title is written in 14 pt font centered on the top margin) (The distance between the Chapter title and the next sentence is *double-spaced 1.5*)

Genetic processes that occur in nature include mating, migration, selection and mutation. These processes and their natural dynamics are the basis for all conservation efforts, both *ex situ* and *in situ* (Young et al., 2000). Migration ensures genetic continuity by transferring genetics between populations. This increase in genetic variation due to migration offsets the detrimental effects caused by selection and *genetic drift* (White et al., 2007).

3.1. Marriage system

According to Schlegel (2003), the mating system is a reproductive system of a particular species. More specifically, it is a group of specific mating types that determine the degree of similarity and/or difference between gametes in the fertilization process. White et al. (2007) defined mating system as the proportion of *inbreeding* and *outcrossing* in a population, while Zobel and Talbert (1984) described it as the probability of two gametes from different organisms to unite and form a zygote. Mating systems are influenced by reproductive biology and spatial structure, the combination of which determines the level and dynamics of genetic diversity (Griffin and Sedgley, 1989; Bawa and Hadley, 1990).

3.1.1. Mating system in sandalwood

Sandalwood is protandry-dicogamous and tends to *outcross* (Tamla et al., 2012). Clonality and low genetic diversity reduce seed production due to the tendency of the mating system to become more *inbreeding*. Therefore, even under conditions of abundance of flowering parents, number of flowers and pollinators, *outbreeding* still dominates the mating system and results in *inbreeding depression* (Dani et al., 2011).



Appendix 8. Example of Punctuation Procedure

1. Semicolon A semicolon can be used to separate equivalent sentences within a compound sentence in place of a conjunction, for example:

"The uses of mahogany plants are numerous, namely the crown is suitable for shading and retaining surface flow rates; the fruit can be used as medicine and raw material for crafts; the wood trunk can be used as firewood, furniture, and construction."

Actually, these details also use commas, but if commas are used, the difference between the details of the equivalent compound sentence and the details of the elements in the smaller sentence is not clearly visible. Another thing to note is that if a semicolon is used, there is no need to use the word "and" before the last detail.

Other than in equivalent compound sentences, semicolons can also be used in downward details whose elements are long groups of words or sentences. In this case, the word "and" is not needed before the last detail.

Wrong shape

A timber businessman was sentenced to 20 days' imprisonment for

- a) Does not have a business license;
- b) Not having a complete timber transportation letter; and
- c) Transporting protected wood species.

Final punctuation in details like the above can use the sign

semicolon. However, the sentences after items a), b) and c) should not be capitalized; and before the last detail, the word "**and**" should not be used.

Correct form

A timber businessman was sentenced to 20 days' imprisonment for

- a) does not have a business license;
- b) did not have complete timber transportation documents;
- c) transporting protected wood species.

2. Colon (:)

Colons are often used incorrectly, especially in sentences that contain details. This will not happen if writers pay attention to the correct writing rules. Colons are used in complete sentences followed by details in the form of words or phrases, for example :

Invasive alien plants have the following characteristics:

- a) fast growth;
- b) fast breeding;
- c) produces a large number of seeds/fruits;
- d) does not require a growth medium;
- e) have different phenologies;
- f) has allelopathic substances;
- g) free of pests and predators.

The statement before the detail is a complete sentence. If the complete sentence is to be followed by a detail in the form of a word or phrase, a colon is placed before the detail. In this case



A colon means "that is" or "namely". In writing such details, each detail is separated by a semicolon. If a comma is used, the word "and" must be added before the last detail. If a semicolon is used, the word "and" is not required before the last detail.

The following is an example of incorrect writing.

Invasive alien plants have the following characteristics:

- a. Growth is fast.
- b. Fast breeding.
- c. Produces a large number of seeds/fruits.
- d. Does not require a growth medium.
- e. Has a different phenology.
- f. Has allelopathic substances.
- g. Free of pests and predators.

3. Comma (,)

- a. Commas are used between elements in a detail or a number.

For example:

1. Forest governance refers to processes, mechanisms, rules and institutions.
 2. Teak, mahogany and meranti are hardwoods.
 3. One, two,... three!
- b. A comma is used to separate two or more equivalent sentences that are preceded by a word such as *but* or *but*.

For example:

1. It does not reduce biodiversity, *but makes* it easier to manage.
 2. Pine wood is not a hardwood, *but* a softwood.
- c. A comma is used to separate a subordinate clause from a parent sentence if the subordinate clause precedes the parent sentence. For example:
1. If managed well, the forest will be sustainable.
 2. Due to poor management, forests can become degraded.
- d. A comma is not used to separate a subordinate clause from a parent sentence if the subordinate clause follows the parent sentence.

For example:

1. Forests will be sustainable if managed properly.
 2. Forests can be damaged by poor management.
- e. Commas are used behind words or expressions that connect sentences at the beginning of a sentence. These include *therefore, so, again, even so, and however*.
- f. Commas are used to separate words like *o, yes, wah, ouch, pity* from other words in the sentence. For example:
1. *O, is that so?*



2. *Wow, what a beautiful view of Mangunan Forest!*
 3. *Be careful not to do the wrong test!*
- g. A comma is used to separate a direct quote from the rest of the sentence.

For example:

1. Says Oldfield, "I think the *Aquilaria* spp. population in Indonesia is getting closer to extinction."
 2. "I think the *Aquilaria* spp. population in Indonesia is getting closer to extinction," says Oldfield, "because I'm finding it increasingly difficult to find in its natural habitat."
- h. A comma is used to break up the part of the name that is reversed in the bibliography.

For example:

Langenheim, J.H. 2003. *Plant Resins*. Portland, Cambridge: Timber Press. 586 p.

- i. A comma is used between a personal name and the academic degree that follows it to distinguish it from an abbreviation of a personal, family or clan name.

For example:

1. Pramudya, S.Hut.
 2. Pratiwi W.A., M.P.
- j. A comma is used in front of tenths or between rupiahs and cents expressed as numbers.

For example:

1. 12,5 m
2. IDR 12.50

Appendix 9. Example of Summary Writing

SUMMARY*

(Chapter title is written in 14 pt font centered on the top margin) (The distance between the Chapter title and the next sentence is *double-spaced 1.5*)

3. A. Introduction (*indentation is 12pt before and after subtitles*)

The introductory chapter summarizes the background, problem, hypothesis, and research objectives. The summary is made more extensive than the digest. The *novelty* of dissertation research is clearly conveyed. This introductory section also adds a theoretical basis / framework of thinking that is compiled by students themselves to solve problems and formulate hypotheses.

This introductory chapter is presented following the chosen model type, whether monograph or research chapter-based.

B. Research Methods (*indentation is 12pt before and after subtitles*)

The explanation of research methods is concise and clear, but broader than a digest. The presentation can be general or chapter-by-chapter for chapter-based research.

C. Research Results and Discussion (*indentation is 12pt before and after subtitles*)

Research results and discussion are presented in a concise and clear manner, but are broader than the digest. The presentation can be in



general or chapter-by-chapter for chapter-based types of research. The discussion also explains the interrelationship of the results between research chapters.

D. Conclusion (*indentation is 12pt before and after subtitles*)

Conclusions are concise and clear, but broader than the digest. The conclusion is a short and clear statement that answers the objectives and research questions and is a summary of the results of the research and discussion.

In the conclusion chapter, recommendations and suggestions can be added based on the author's judgment with reference to the research results.

*Summaries can also be written without using sub-subheadings like the example above.



