

WRITING GUIDELINES

THESIS & DISSERT-ATION

POSTGRADUATE

STATE UNIVERSITY OF SURABAYA 2019

KATA PENGANTAR

Kami bersyukur kepada Allah atas penyelesaian buku *Pedoman Penulisan Tesis dan Disertasi Pascasarjana Universitas Negeri Surabaya Tahun 2020*. Buku ini merupakan rujukan dalam penulisan tesis dan disertasi di Pascasarjana Universitas Negeri Surabaya.

Dalam buku ini disajikan hal-hal teknis penulisan tesis dan disertasi sesuai dengan kebutuhan nyata di lapangan. Dengan sajian itu diharapkan pada satu sisi mahasiswa terbantu dalam mengekspresikan ide-ide akademisnya dan pada sisi lain terdapat kesamaan persepsi antarsivitas akademika yang menangani tesis dan disertasi.

Di samping mendapatkan banyak kemudahan, penyelesaian buku ini juga terkendala oleh keterbatasan waktu, ketidaktersediaan acuan tata tulis ilmiah domestik yang standar, keberagaman gaya selingkung penulisan karya ilmiah, dan sebagainya. Kendala-kendala tersebut pada akhirnya dapat teratasi oleh pemikiran-pemikiran solutif yang diberikan berbagai pihak. Atas pemikiran-pemikiran kontributif tersebut kami berterima kasih.

Sekalipun telah diupayakan untuk dapat menjadi pedoman yang efektif, seperti halnya produk akademis lain, buku ini memiliki beberapa bagian yang harus disempurnakan. Karena itu, kontribusi dari berbagai pihak kami perlukan untuk penyempurnaan ke depan. Semoga buku ini bermanfaat bagi pengguna.

Surabaya, 17 Agustus 2019
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CHAPTER I
INTRODUCTION

Thesis is a scientific work resulting from theoretical testing research which is a requirement for graduation of undergraduate students (S-2). Unlike the thesis, a dissertation is the result of research that produces scientific information, concepts, propositions, or new theories that are a requirement for graduation of third degree students (S-3).

In general, the writing system of the thesis and dissertation is relatively the same, namely using the style of the context applied. When viewed from the substance, the weight of the dissertation is higher than the thesis, especially the facts and theories that must be referred through the synthesis process as the basis and rationale of research.

It has been hinted at the front that theses and dissertations are forms of scientific work, that is, work produced through the scientific method. The scientific method is a method of obtaining scientific knowledge carried out through two pathways, namely the path of reason (reason) and the path of experience (observation / experiment) or *deducto hypothetico verifiative.* The operational form of the scientific method is scientific research.

In this context scientific research is defined as a systematic academic process of obtaining answers to problems, questions, or research focuses. The hallmark of scientific research is problem solving through valid data-driven reasoning. If related to this, theses and dissertations are thus the result of problem solving through research conducted rationally and empirically. It implies that theses and dissertations are the results of technical research that contains what and why something is researched, how to research it, and what are the concrete results.

Despite the similarities, theses and dissertations differ in some ways. In line with the concept of depth and breadth of minimal material that in S-2 students are conditioned to master the theory and theory of application of certain fields of knowledge and

In S-3, students are conditioned to master scientific philosophy in certain fields of knowledge and skills, the difference between theses and dissertations at the Surabaya State University Postgraduate is shown in table 1 below.

Table 1 Differences between Thesis and Dissertation

Aspek	Tesis	Disertasi
Problems	make an applicative contribution to science	make theoretical contributions to science
Theoretical Studies	Discusses the relationship and differences / similarities between research	explain the position / role of the research carried out and convey personal thoughts every time discussing the results of other research
Research Results	Explain phenomena with the support of data and comparison with other similar research as a process of testing theories (limited to showing *the facts*) and not producing new theories, propositions, or concepts	explain phenomena with the support of data and compare with other similar research as a process of producing new theories, propositions, or concepts
Independence	Independence rate 60—79%	Independence level 80—100%
Journal references	Minimum 15 journals, 10 of which are indexed/reputable international scientific journals	Minimum 30 journals, 20 of which are indexed/reputable international scientific journals
Length	50,000 to 60,000 words, specifically for the fields of language and literature	60,000 to 80,000 words, specifically for the fields of language and literature

CHAPTER II
SYSTEMATICS OF THESIS/DISSERTATION WRITING

The thesis/dissertation manuscript consists of three parts, namely the beginning, the core part, and the final part.

A. Initial Section

The initial part of the thesis/dissertation includes the title page, approval page, endorsement page, presentation page (if any), abstract, preface, summary, table of contents, table of tables (if any), list of figures/graphs (if any), list of appendices (if any), and other lists, such as symbols/symbols (if any) and phonetic letters (if any).

1. Title Page

The title page includes the outer cover page and the inner cover page. On the outer cover (*cover*) written THESIS / DISSERTATION, Surabaya State University logo, student name, student parent number (NIM), institution name (university name, postgraduate and study program), and year of writing.

a. The title of the thesis/dissertation is capitalized. The title of the thesis/dissertation should ideally be short, concise, and describe exactly the problem under study. On the inner cover page, below the words THESIS/DISSERTATION written in upright letters **Submitted to the Postgraduate Program of Surabaya State University to Meet Some of the Requirements in Obtaining a Master of Education/Doctor of Education Degree in the Study Program** On the outer cover, There is no such writing. On the inner cover page **there is no Unesa logo**.

b. In writing the name of the thesis / dissertation compiler, non-capital letters are used, except for the first letter of each element of the name. Under the name is written NIM.

c. The name of the institution is written in capital letters and arranged symmetrically.
d. The year of writing is written with Arabic numerals without preceding the word year . Full examples can be observed in Appendix 1, Appendix 2, Annex 5, and Appendix 6.

2. Consent Page

The approval page is used to indicate that the thesis/dissertation submitted in the examination is approved by the supervisors/promoters and directors. On the page is written the student's name, thesis/dissertation title, supervisor/promoter's name, and approval date. The format of the approval page is presented in appendices 3 and 7.

After the thesis is tested and the student is declared passed, the approval page is released. In other words, on a thesis that has been finalized the approval page is not included.

Unlike the approval page in the thesis, the approval page in the dissertation consists of two types, namely the approval page used in the dissertation manuscript for the eligibility examination and the approval page used for the closed examination. The approval page used in the dissertation manuscript for the closed examination is not included in the dissertation manuscript for the open examination because it is replaced with the recommendation page. The format of the recommendation page is presented in appendix 8.

3. Confirmation Page

The confirmation page contains a confirmation statement by the tester team. On the confirmation page is written the word VERIFICATION symmetrically. Examples of his writing are in Appendix 4 and 9.

4. Offering Page (if applicable)

Tribute pages are used by researchers to write memorable phrases presented

to certain parties who according to researchers have a special role in its success. The offering page can also contain words of wisdom that researchers think are good to include in the thesis / dissertation manuscript.

5. Abstract

The abstract of the thesis/dissertation is written in two languages, namely Indonesian and English. Fill in the abstract of the thesis / dissertation maximum of one page and typed with a distance of one space.

Abstract is not a summary of a thesis / dissertation, without additional interpretations, criticisms, or responses. Abstracts are principally used to equip readers with a writing core that includes objectives, methods, results, and conclusions. An example of an abstract can be seen in Appendix 13.

6. Foreword

The content of the preface includes a statement of gratitude to God that the process of writing a thesis/dissertation has been completed and gratitude to those who helped smooth the writing of the thesis/dissertation.

7. Table of Contents

The thesis/dissertation section written in the table of contents is the chapter titles and subchapter titles. The distance between chapters is two spaces, while the spacing between subchapters in chapters is one space.

8. Table (if any)

9. List of Images/Graphics (if any)

10. Attachment List (if any)

11. Other Lists (if any)

B. Core Parts

The core part is the section that contains the main chapters of the thesis/dissertation. The writing of the core part follows the following systematics.

BAB I PENDAHULUAN
A. Background
B. Research Scope (if needed)
C. Problem Statement/Research Question/Research Focus
D. Research Objectives
E. Definisi Istilah
F. Research Benefits
G. Assumption
CHAPTER II LITERATURE REVIEW
CHAPTER III RESEARCH METHODS
CHAPTER IV RESEARCH RESULTS
CHAPTER V DISCUSSION
CHAPTER VI CONCLUDING
A. Conclusion
B. Suggestion

Especially for qualitative research, the format can be adjusted as needed.

1. Chapter Introduction

a. Background

If the thesis/dissertation is oriented to solve the problem, the subchapter ‖Background‖ contains a description of the problem (root cause) studied in the research. If the orientation is not problem solving, the subchapter contains a description of how important and how interesting the thing under study is.

The background is presented in the form of a gap analysis that compares what should be

and what is. The data used as a benchmarking basis can be primary, secondary, or reference data from selected references.

The description on the background is used to convince other parties, especially mentors/promoters and examiners. For this purpose, original analysis and synthesis of selected data or references is important.

Operationally, the elements that need to be presented in the background are 1) an explanation that the research problem under study is important and interesting, 2) evidence that the problem proposed does not have a satisfactory answer or solution, 3) previous research that underlies the research to be carried out or evidence of research novelty, especially sourced from reputable scientific journals or other field findings, and 4) prospects for research results both theoretically and practically.

If the thesis/dissertation is not oriented to solve a problem, for example to perfect a particular science or technology product, in subchapter ||Background|| evidence of the latest scientific or technological achievements is described. In addition, the prospect of improvement/innovation that will be carried out through research is also outlined.

b. Research Scope

If the problem or efforts to improve certain science/technology products are too broad, restrictions are needed so that the scope of research is clear. If the problem or efforts to improve the science/technology product are focused and operational, the research scope subchapter is not necessary.

c. Research Problem/Research Question/Research Focus

The research problem, research question, or research focus must be stated explicitly, clearly, and

concise. Problem formulation (root cause based) and research questions (not root cause based, but importance and interest based) are expressed in question sentences, while research focus (not root cause based, but importance and attractiveness based) is stated in statement sentences.

The research problem, research question, or research focus plays an important role in research. Through analysis of research problems, research questions, or research focuses, students' academic readiness can be identified in the preparation of research designs.

d. Research Objectives

The formulation of research objectives is used to provide an overview of what is achieved after the research is conducted. Therefore, it is necessary to pay attention to the choice of words, especially operational verbs, that are appropriate in the preparation of research objectives. The research objective should be relevant to the research problem, research question, or research focus both in terms of number and sequence.

e. Definition of Terms (if Required)

Terms (terminology) that are important and can give rise to various interpretations need to be given limits (definitions) in accordance with the purpose and purpose of using these terms in research. Terms that need to be limited are the terms listed in the title, problem/question/research focus, and research objectives. The definition of terms must be based on a strong theory and written in one sentence by mentioning genus (general characteristics) and differentiation (special characteristics that are different from other things) without reference.

f. Research Benefits

The benefits of research are used to provide an overview that research results can be utilized theoretically and practically. Theoretical benefits contain a description that the results of research have a contribution to scientific development in accordance with the scope of the field of science studied. Practical benefits contain a description that research results can be used by certain parties for the benefit of teaching, solving real-life problems, further research, or others.

g. Assumptions (if Required)

Assumptions are used to underlie the researcher's frame of mind. Assumptions are assumptions whose truth does not need to be tested in research. The assumptions proposed are basically used as conditions and at the same time the basis for determining the frame of mind.

2. Chapter on Theoretical Studies

Theoretical studies contain the results of critical synthesis of various theories, propositions, or concepts from selected references to compile a theoretical framework for solving problems, questions, or research focuses. Basically, theoretical studies include (1) literature reviews that are related to problems, questions, or research focuses and preparation of a theoretical framework or frame of mind developed by researchers.

The content of the theoretical study is focused on the problem under study and is used to provide an overview of (a)position (position) of research problems in the chain of development of science and technology or its position in the context of larger problems related to the field studied, (b) targets and targets of solving life problems and their benefits for the development of human life in line with the times, (c) methodological thinking especially

in determining the design of research and development of research instruments, and (d) the design of research results. In theoretical studies, the constructs of research variables are described through critical synthesis until detailed indicators and classifications are obtained.

Academic materials that are used as reference sources for theoretical studies are articles from reputable scientific journals, classy research results, selected books, broad-scale actual policies, and those at the same level as it. These materials are processed through ||mastication|| which is accompanied by critical responses and not just ||swallowing|| so that synthesis efforts appear.

Review of relevant research results,

Whether the results of the research have been presented in reputable scientific journals or are still in the form of research reports, in this case they are united with studies of other study materials. In other words, the study of research results is not presented in a separate subchapter that is separate from other theoretical studies.

In hypothetical research, in theoretical studies researchers deduct and elaborate in the form of a framework of thinking about the influence of one variable on other variables. Hypotheses are presented at the end of the theory study in the form of statement sentences.

3. Chapter on Research Methods

In the chapter on research methods, technical (nontheoretical) aspects of research activities in the field are described as a vehicle for accountability for the truth of scientific research findings and results. In this section it is necessary to describe the following points that are considered relevant.

a. Research Design

In this section, the approach (quantitative or qualitative) or the type of research carried out is mentioned. In addition, in this section can

A chart is presented illustrating the interrelation of variables in the research constellation.

b. Research Variables

In quantitative research, in this section are presented all research variables and operational definitions. The operational definition of a variable is a statement about the technical side of measuring research variables. In other words, operational definition is a statement about the concept of variables, measurement techniques or application of variables in research, and indicators used.

In contrast to quantitative research, in qualitative research this section contains the focus and dimensions of research. Focus is equivalent to variables, dimensions are equivalent to indicators.

c. Population, Sample, or Research Subject

In hypothetical research, this subchapter describes the population as the target of generalizing research results, research samples, and techniques for determining the minimum sample size, including the formulas used. In research that does not hypothesize, the subject of research is explained, both the determining criteria, the amount, and specifications.

d. Place and Time of Research

In this section, the specifics of the place of research and the reasons for its selection are described. In addition, the specification of the time for conducting research is also described.

e. Data Collection Techniques and Research Instruments

This section describes research data collection techniques, such as observation, interviews, or tests. In addition, instruments are also described

data collection. When research takes a quantitative approach, it is necessary to explain the validity and reliability of the instruments used to measure research variables. If the research has a qualitative approach, it is necessary to explain the techniques of collecting and checking the validity of the data.

f. Data Analysis Techniques

Data analysis techniques, hypothesis testing (if any), and inference are described in this section. In quantitative research, the reasons for choosing a statistical model need to be adequately described so that it is scientifically acceptable. In qualitative research, the description in this section contains an explanation of the analysis or interpretation of the data collected, including the process of reducing and presenting the data. It is also necessary to explain the analysis model, for example thematic or chronological analysis.

4. Chapter Research Results

The results of the study are presented in subchapters A, B, C, and so on with subheadings according to the order and number of problem formulations, research questions, or research focus. In hypothetical research, this subchapter is explained in depth (1) data on the measurement results of each research variable in the form of data tables or graphs equipped with explanations of central tendencies, dispersion, and so on; (2) the process of testing requirements analysis or arguments about non-conduct of requirements testing; and (3) the process of hypothesis testing in accordance with the standard procedure of hypothesis testing. In qualitative research, this subchapter describes in depth the data from observations or other data collection techniques and the results of the meaning of the data. In development research,

This subchapter describes the process of analyzing the data of each variable at all stages of research.

5. Chapter Discussion

The content of the discussion chapter is an in-depth explanation of the achievement and non-achievement of research objectives, irregularities contained in the results of data analysis, the physiology of the application of results in the field, various possibilities related to the results of the analysis that lead to conclusions; the relevance of research results to relevant theories or research results described in Chapter II; and academic contributions of research results or findings to the development of science by stating, For example, that the results of research revise the results of previous research or even invalidate certain theories. In the dissertation, statements about the novelty of research results must be stated explicitly accompanied by adequate academic evidence. To get the scientific weight of research, in providing an in-depth explanation of these things, researchers are required to refer to the latest articles in reputable international journals that are relevant to the field of thesis / dissertation.

6. Concluding Chapter

This chapter contains conclusions and suggestions.

a. Conclusion

This subchapter presents ―short answers‖ to problem statements, research questions, or research focus. In other words, this subchapter presents extracts from research and discussion. In the dissertation, researchers need to present ―theoretical perspectives‖ research results so that they are of more value in the scientific map that is the object of the dissertation.

b. Suggestion

In this subchapter it is elaborated technically and Detailed things that are important for users of research results to do. The formulation of suggestions must be relevant to the benefits and conclusions of the study. If deemed necessary, researchers can formulate implications of research results or recommendations, namely technical and operational instructions on how to use research results/outputs.

C. Final Section

The final part of the thesis/dissertation contains a list of references, appendices, and curriculum vitae.

1. Referral List

A reference list is a list of journals, research reports, books, wide-scale official documents, or other selected types of references referenced in the writing of a thesis/dissertation. All referenced references are presented in the reference list.

2. Attachments

The things attached to the thesis/dissertation are documents that are relevant to research activities and corroborate research results. These documents include the following.

a. Official letters related to research, such as permission letters and answer letters from the leaders of the agencies / regions studied.
b. The results of statistical calculations are good for the benefit of trials and analysis of research data.
c. Transcription of interview results is relatively long.
d. Important images that are not presented in the thesis/dissertation manuscript.
e. Important photographs and the like that are documentation of the process and results of research.

CHAPTER III
MATERIALS, FORMAT, AND WRITING PROCEDURES

A. Material

Paper and ink materials used for the thesis/dissertation are arranged as follows.

1. The paper used is 80 grams of HVS, white, and A4 (21 x 29.70 cm).
2. The paper used for tables and figures (including photographs) is the same as the paper used in a thesis or dissertation manuscript.
3. The ink used is black ink.
4. The outer cover of the thesis is a cardboard covered with dark blue paper (*hard cover*), while the outer cover of the dissertation is dark brown with gold yellow writing. The logo of Surabaya State University on the outer cover is golden yellow, with no other colors.

B. Format

1. Spacing and Font

Typing distance (space) and font size in writing a thesis/dissertation are as follows.

a. The thesis/dissertation is typed with a distance of 1.5 spaces and per sheet two pages (turned).
b. The letters used are 12 pt and are New Times Roman. All thesis/dissertation manuscripts use the same type.
c. Emblems, letters, signs, and drawings that cannot be done with a typewriter or computer are neatly handwritten using black ink.

1. Cursive letters are replaced with similar regular letters and underlined.
2. Paragraphs are typed into 7 beats or start at the 8th beat.

2. Margin Typing

The format of margin is as follows:

A. Margin Left	: 4 cm
B. Margin Top	: 4 cm
C. Margin Right	: 3 cm
D. Margin Bottom	: 3 cm

C. Writing Procedures

1. Page Numbering

Page numbering on a thesis or dissertation follows the following rules.

a. The page number of the thesis/dissertation manuscript is typed with Arabic numerals in the upper right corner (3 cm from the right and 2.5 cm from the top).
b. Each chapter starts with a new page and its page number is typed in the middle at the bottom of the page.
c. The beginning of the thesis/dissertation manuscript is given a page with small Roman numerals in the middle of the bottom. The title-in page does not need to be assigned a page, but its page sequence number is taken into account.
d. Any marking on page numbers is not justified.

2. Writing Tables, Figures, and the Like

The writing of tables, figures, graphs, or others follows the following rules.

a. The width of tables, figures, and the like is equal to the width of the page (according to the format).
b. The table title is typed above the table. To mark the table is assigned a table number and Arabic numerals are used. If in a thesis or dissertation manuscript there are many tables in each chapter, table numbering is made according to the chapter, for example the table in Chapter I is numbered Table 1.1, Table 1.2, and the table in Chapter II is numbered Table 2.1 and Table 2.2. When the title is more than one line, single spaces are used.
c. Image, graph, and chart titles are typed at the bottom. The numbering of figures, graphs, and charts is the same as the numbering of tables. If the image is a quoted image, it is necessary to include the source.

3. Systematics of Chapter Division

The system of dividing chapters according to the level of chapters, subchapters, sub-subchapters, and so on. The conditions are as follows.

a. Used mixed numbers of numbers and letters.

Chapter	I
Subab	A.
Sub-subbab	1.
Part of *heading* 1.	a.
Part of *heading* a.	1)
Part of *heading* 1)	a)
Part of heading a)	(1)
Part of the *heading* (1)	(a)
Part of the *heading* (a)	i)
Pairs from *heading* i)	ii)

Pair of *headings* (a)	(b)
Pairs of *headings* (1)	(2)
Pairs of *headings* a)	b)
Pairs from *heading* 1)	2)
Pairs of *headings* a.	b.
Pairs from *heading* 1.	2.
Pair of *heading* A.	B.
Pair from *heading* I.	II

b. For chapter numbers, capital Roman letters/numbers are used, subchapters are used capital letters A, B, C, and so on, subchapters are used Arabic numerals with periods, and sub-subchapters are used non-capital letters a, b, c, and so on and end with a period. If there are still smaller divisions, Arabic numerals with closing brackets are used, and so on, non-capital letters with closing brackets.

4. Font Usage

The use of letters in the thesis/dissertation is regulated as follows.

a. Chapter titles are written symmetrically in all capital letters. For example, the word **CHAPTER I** is written on the first line, while the introduction is written on the line below.
b. Subchapter headings (A, B, C, and so on) are typed from the left margin, and subchapters adjust because each breakdown of the contents of subchapters into subchapters is not the same. The title is capitalized only at the beginning of each word, except for the words assignment, e.g. *and*, for*, and* for *which all letters are written in non-capital letters.*

5. Citations

In-text quotations consist of direct quotations and indirect quotations. All sources are accompanied by years and pages, for example... (Siswanto, 2019:162—163), should be mentioned when quoted, unless it appears multiple times in the same paragraph. When a source appears multiple times in the same paragraph, only the first source is mentioned in full (along with the year of publication and pages). In the next quotation, it is only necessary to include the author's name. It should be noted that in citing sources only the author's last name or surname is used.

a. Direct quote

All direct quotations from published works are written like original manuscripts. In direct quotes that are less than 40 words (short quotes), quotations are integrated into the text and enclosed in double quotation marks. In direct quotations that are more than 40 words (long quotes), quotations are written in a single space in an indented format without using quotation marks. The quote starts on a new line and all lines are spaced 7 taps away from the left margin. If there are additional paragraphs in the citation, the spacing between paragraphs is twice the spacing between lines. If any part is omitted, it is replaced with three dots. When there is an addition of letters, words, or sentences; error correction; clarification of names; and the like; The parts are written in square brackets.

b. Indirect quotes

Indirect quotations are written by changing the redaction of the original manuscript through trapping, interpretation, or synthesis without changing the ideas conveyed in the source. Because direct quotations contain the contribution of the quoter's thoughts and on the other hand can minimize the percentage of plagiarism, indirect quotations are considered better than direct quotations as long as the substance of the quotation is the same. Therefore, the use of indirect quotations is recommended.

6. Bibliography Writing

The reference list is written using the model *APA* with slight modifications to linguistic aspects, for example —*retrieved* from‖ modified to —downloaded from‖, and the prevalence of writing in Indonesian, e.g. —(year,month, and date)‖ modified to —(date, month, and year)‖ and the initial letter per word other than the task word in the title is modified to capital letters. In other words, in writing references there is a combination of the APA model and Indonesian grammar rules regulated in the *General Guidelines for Language Spelling Indonesia* (2016).

In the list of references are listed only references referenced in the text. In contrast, references referenced in the text should be listed on the reference list. The order of references in the reference list is written alphabetically with the font Times New Roman 12 pt. How to write library sources as follows.*)

a. Periodical Sources

Reference Type	Format	Example
Printed journal articles with *Digital Object Identifier* (DOI)	Writer. (year). The title of the article. *Periodical name*, Volume (number). DOI	Hopkins, J., & Ball, L. (2011). The design of lessons usingmathematics analysis software to support multiple representations insecondary school mathematics. *Technology, Pedagogyand Education, 20*(1). DOI: 10.1080/1475939X.2010.534869
Print Journal Articles without *Digital Object Identify* (DOI)	Writer. (year). The title of the article. *The name of the periodical*. Volume (number), page.	Retnaningdyah, Pratiwi. (2013). _Kami Juga Punya Suara': Dunia Blogging Buruh Migran Indonesia di Hong Kong sebagai Politik Budaya. *Jurnal Komunikasi Indonesia*. 2(1), 17—28.
Online journal articles with *Digital Object Identifier* (DOI)	Writer. (year). The title of the article. *Journal name*. Online publication. DOI	Erman, E., Liliasari, L., Ramdani, M., & Wakhidah, N. (2019). Addressing Macroscopic Issues: Helping Student Form Associations between Biochemistry and Sports and Aiding Their Scientific Literacy. *International Journal of Science and Mathematics Education Volume 18 (107)*. Online publication. DOI:https://doi.org/10.107/s10.763-019-09990-3. Madlazim dan Prastowo, Tjipto. 2016. Evaluation of Earthquake Parameters Used in the Indonesian Tsunami Early Warning System. *Earthquake Science Volume 29 (1).* Online

		Publication. DOI: https://doi.org/10.1007/s11589-016.0143-6
Online journal articles without *Digital Object Identifier* (DOI)	Writer. (year). The title of the article. *Journal name*, Volume (number), page. Downloaded from http://www.xxx	Clarkson, K. (2007). Learning geometry intuitively with the aid of a newcomputer tool: The Geometer's Sketchpad. *The Mathematics Educator, 2*(1),1—5. Diunduh dari http://jwilson.coe.uk/DEPT/Science.html
Newspaper articles	Writer. (date, month, year). The title of the article.*Newspaper name*, Page.	Dahana, Radhar Panca. (25 Mei 2019). Pendidikan Kultural-Ilahiah. *Kompas*, 7.
Articles in online newspapers	Writer. (date, month, year). The title of the article. *Mailing name news*. Downloaded from http://www.xxx	Sikumbang, Yudhia Perdana. (15 Desember 2017). Pengelolaan Aset Desa Melalui BUMDesa. Detik.com. Diunduh dari https://news.detik.com/opini/d-3771324/pengelolaan-aset-desa-melalui-bumdesa?tag_from=wp_nhl_9
Articles in Magazines	Writer. (month, year). The title of the article. *Magazine name*, issue(number), number pages.	Setiawan, Hadi dan Ami, Muslich. (Juni, 2019). Tangani Defisit Neraca Jasa Melalui Tarif PPN Nol Persen. *Media Keuangan* 14 (141), 43—45.

Articles in Online Magazines	Writer. (month, year). The title of the article. *Magazine name*, Edition(number). Downloaded from http:www.xxx	Darmawan, Mohammad Windu. (Maret, 2019). Program Secondment dalam Sinergi DJP-DJBC. Media Keuangan, 14(138). Diunduh dari https://mediakeuangan.kemenkeu.go.id/Home/Detail/91

b. Book Source

Reference Type	Format	Example
Books with an author	Writer. (year). *The title of the book*. City: Publisher.	Siswanto, Tatag Yuli Eko. (2019). *Paradigma Penelitian Pendidikan: Pengembangan Teori dan Aplikasi Pendidikan Matematika*. Bandung: Rosdakarya.
Books with two or more authors	Writer. (year). *The title of the book*. City: Publisher.	Retnaningdyah, Pratiwi & Dewayani, Sofie. (2018). *Suara dari Marjin: Literasi sebagai Praktik Sosial*. Bandung: Remaja Rosdakarya. Ahmadi, A., Yuliyanto, A., Indrawati, D., Parmin, J., Rengganis, R., Suhartono, Sodiq, S., Indarti, T., &Yuniseffendri. (2016). Menulis Ilmiah: Buku Ajar MPK Bahasa Indonesia. Surabaya: Unipress.
Electronic book (e-book)	Writer. (without year). *The title of the book.* Downloaded from http:www.xxx	O'keefe, E. (tanpa tahun). *Egoism & the crisis in western values*. Diunduh dari http://www.onlineoriginals.com/showitem.asp?itemID=135
Edited book by writers	Writer. (year). *Heading books*. (Name	Hariyono, Eko dan Lilisari, Solaiman. (2018). *Natural Hazards-Risk Assessment and*

	editor, Ed.). City: Publisher.	*Vulnerability Reduction*. (Jose Simao Antunes do Carmo, Ed.). London: IntechOpen.
Books issued by the institution	Institution. (year). *The title of the book*. City: Publisher.	Direktorat Pembinaan Sekolah Menengah Pertama. (2017). *Panduan Penilaian oleh Pendidik dan Satuan Pendidikan Sekolah Menengah Pertama.* Jakarta: Direktorat PSMP.
Books edited without authors	Editor's name. (Ed.). (year). *The title of the book*. City: Publisher.	McArthur, D. & John, G.M. (Ed.). (2017). *Reading comprehension.* Edisi ke-6. Cambridge: Cambridge University.
Books without authors	Judul buku. (tahun). *Judul buku*. Kota: Penerbit.	Panduan Penyusunan Kurikulum Pendidikan Tinggi. (2016). Jakarta: Direktorat Pembelajaran.
Two or more books with the same author and year.	Writer. (year). *The title of the book*. City: Publisher. *) Written in the manner described, with the additional letters a, b, c, and so on, placed in parentheses at the end year published.	Rachmadiarti, Fida. (2017a). *Ekotoksikologi*. Surabaya: Unipress. Rachmadiarti, Fida. (2017b). *Konservasi SDA dan Lingkungan*. Surabaya: Unipress.
Two or more books with an author the same	Writer. (year). *The title of the book*. City: Publisher. *) with	Yulianto, Bambang. (2011). *Pengembangan RPP Bahasa Indonesia yang Efektif dan Efisien: Dilengkapi dengan Pemetaan SK/KD dan BKS*. Surabaya:

and different published years	books published in the last year are numbered, followed by books published in the previous year.	Unipress. Yulianto, Bambang. (2011). *Perkembangan Fonologi Bahasa Anak: Buku Referensi Fonologis*. Surabaya: Unipress.
Translated books	Writer. (year). *The title of the book*. (Name of translator, translator). City: Publisher.	Creswell, John W. (2019). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*. 3rd printing. (Achmad Fawaid and Rianayati Kusmini Pancasari, penerjemah). Yogyakarta: Pustaka Pelajar.

c. Other Sources of Printed Material

Reference Type	Format	Example
Thesis/dissertation (unpublished)	Writer. (year). *Dissertation/thesis title* (Unpublished thesis/thesis). Name of institution, City.	Indarti, Titik. (2015). *Gerakan Sastra Buruh Migran Indonesia di Hongkong* (Disertasi tidak diterbitkan), Universitas Negeri Malang, Malang.
Thesis/dissertation published in the database of the Institute	Writer. (year). *Thesis/dissertation title* (Thesis/dissertation). Downloaded from the database name.	Djubaidah, Elis. (2013). Pembelajaran Berbasis TIK dengan Model STAD untuk Meningkatkan Penguasaan Konsep dan Retensi Pengetahuan pada Materi Sistem Pencernaan Makanan. (Disertasi). Diunduh dari http://repository.upi.edu/2865/10/T_IPA_1007255_Bibliography.pdf

Papers in seminars	Publisher. (Month, year). *The title of the paper*. Papers are presented in (seminar name), City.	Supratno, Haris. (Maret, 2019). Pendidikan Multtikultural di Pondok Pesantren di Jawa Timur. Makalah disajikan dalam Seminar Pendidikan Multikultural, Padang.
Symposium	Contributors. (month, year). The title of the contribution. In (name of chief contributor) (Chairman), *Title of symposium.* The symposium is organized by (name of institution),city.	Retnaningdyah, Pratiwi. (April, 2014). Claiming Thirdspace and the Practice of Suitcase Libraries. Dalam John Mellark (Ketua), *The Uses of Literacy Symposium*. Simposium diselenggarakan oleh UNSW, Sydney.
Papers presented at conferences and published *online*	Writer. (month, year). *The title of the paper*. Papers are presented on (forum name). Downloaded from http://xxx.	Kisyani. (Agustus, 2018). *The Development of Supplementary Book Based on Direct Reading Thinking Activities to Increase the Intensive Reading Learning Outcomes*. Makalah disajikan pada Social Sciences, Humanities and Economics Conference. Diunduh dari http:///Users/kisyani/Downloads/search-2.html/.
Papers in the proceedings	Writer. (year). *The title of the paper*. Description of proceedings, city. Pages.	Sudikan, Setya Yuwana. (2017). Kearifan Budaya dalam Pendidikan Bahasa dan Sastra Indonesia. Prosiding Seminar Pembelajaran Bahasa dan Sastra Indonesia Berbasis Multikultural, Yogyakarta. 1-39.

d. Sources Not Printed Material

Reference Type	Format	Example
Messages sent on discussion forums	Writer. (date, month, year). Post title [Description of message body]. Downloaded from http:www.xxx	Rampersad, T. (8 Juni 2005). Re: Traditional knowledge and traditionalcultural expressions [Online forum comment]. Diunduh dari http://www.wipo.int/roller/comments/ipisforum/Weblog/theme eighChow can cultural#comments
Messages sent by e-mail	Writer. (date, month, year). Post title [Description of the content of the e-mail]. Downloaded from http:www.xxx	Smith, S. (5 Januari 2006). Re: Disputedestimates of IQ [Electronic mailinglistmessage]. Diunduh dari http://tech.groups.yahoo.com/group/ForensicNetwork/message/670
Blog	Writer. (date, month, year). Post title [Description of blog content]. Downloaded from http:www.xxx	Haryanto, Reevi. (24 Juli 2019). Transformasi Pendidikan Abad ke-21 Melalui Rumah Belajar [Blog Pendidikan]. Diunduh dari http://pena.belajar.kemdikbud.go.id/2019/07/tranformasi-pendidikan-abad-21-melalui-rumah-belajar/
Videos on the blog	Publisher. (date, month, year). Video title: [Description of the content of the video]. Downloaded from http://www.xxx	Ranoptri, Deni. (22 Maret 2018). 5 Pendekatan Saitifik Kurikulum 2013 (Video pembelajaran]. Diunduh dari https://www.youtube.com/watch?v=zu91hkFD5i0

*) Other things that have not been regulated in this book can be referred to the American Psychological Association- APA Style Guide to Electric References (2012) and Publication Manual of the American Psychological Association (APA, 2019)

D. Other Things

1. The language used in the thesis/dissertation is Indonesian official variety and in accordance with standard Indonesian rules. Especially for the English Language and Literature Education Concentration Study Program, the thesis/dissertation is written in the official variety of English in accordance with applicable rules. In terms of the mechanical aspects of language, the reference for writing a thesis/dissertation is the General Guidelines for Indonesian Spelling (PUEBI).
2. References recommended for use in a thesis/dissertation are first-hand references with a publication year of the last ten years, except for parent references. Second or more second hand references, except with good reason, should not be used so that there is no bias of thought that can reduce the quality of the thesis/dissertation.
3. This manual is of a general nature. Writing a thesis/dissertation in a particular field that has a special nature, such as the fields of literature, art, and history, can adjust it with notes that must still show high commitment and consistency as a quality scientific paper.
4. The proposal tested in the proposal exam must also be written following the guidelines for writing this thesis or dissertation. An example of the format of the proposal title page for the proposal exam is presented in Appendix 10. Meanwhile, the format of the approval page and its endorsement page are presented in Appendix 11 and Appendix 12.

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American Psychological Association. (2012). *APA Style Guide to Electric References*. Edisi ke-6. Washington: American Psychological Association.

Murray, Neil dan Beglar, David. (2009). *Writing Dissertations and Theses*. London: Pearson.

Pascasarjana Universitas Negeri Surabaya. (2017). *Pedoman Penulisan Tesis dan Disertasi*. Surabaya: Unesa

Tim Pengembang Pedoman Bahasa Indonesia. (2016). *Pedoman Umum Ejaan Bahasa Indonesia*. Jakarta: Badan Pengembangan dan Pembinaan Bahasa.

APPENDIX 1
EXAMPLE OF THESIS TITLE PAGE
(OUTER COVER)

ANALYSIS OF STORY SOLVING ERRORS
BY GRADE V ELEMENTARY SCHOOL STUDENTS IN EAST JAVA

THESIS



Indra Nihlah Annashih
NIM 177786007

STATE UNIVERSITY OF SURABAYA
POSTGRADUATE
MATHEMATICS EDUCATION STUDY PROGRAM
2019

APPENDIX 2
EXAMPLE OF THESIS TITLE PAGE
(INSIDE COVER)

ANALYSIS OF STORY PROBLEM SOLVING ERRORS BY GRADE V ELEMENTARY SCHOOL STUDENTS IN EAST JAVA

THESIS

Submitted to Postgraduate State
University of Surabaya to Partially Meet the Requirements
in Obtaining a Master of Education Degree on
Mathematics Education Master Program

Indra Nihlah Annashih
NIM: 177786007

STATE UNIVERSITY OF SURABAYA
POSTGRADUATE
MATHEMATICS EDUCATION STUDY PROGRAM
2019

APPENDIX 3
SAMPLE THESIS APPROVAL PAGE

APPROVAL

Thesis by Indra Nihlah Annashih, NIM 177786007, entitled *Analisis Kesalahan Penyelesaian Soal Cerita oleh Siswa Kelas V Sekolah Dasar di Jawa East* has qualified and approved for examined

Supervisor I, Date

(signature)

Supervisor II, Date

(signature)

Known by,
Head of Study Program

Dr. Tatag Yuli E.S., M.Pd.
NIP

APPENDIX 4
EXAMPLE OF THESIS VERIFICATION PAGE

AUTHENTICATION

The thesis by Indra Nihlah Annashih, NIM 177786007, was defended in front of the Examination Team on July 1, 2019

Examiners Team

Name	Signature	Position
.....	.....	Chief
.....	.....	Member/Advisor I
.....	.....	Member/Advisor II
.....	.....	Member
.....	.....	Member

Known by,
Postgraduate Director

Dr. Edy Mintarto, M.Kes.
NIP 196612161998011002

APPENDIX 5
EXAMPLE OF DISSERTATION TITLE PAGE
(OUTER COVER)

FRACTIONAL LEARNING IN PRIMARY SCHOOL BY USING THE APPROACH OF MATHEMATICS REALISTIC

DISSERTATION

Dedi Purnama
NIM 167786007

STATE UNIVERSITY OF SURABAYA
POSTGRADUATE
MATHEMATICS EDUCATION STUDY PROGRAM
2019

APPENDIX 6
EXAMPLE OF DISSERTATION TITLE PAGE (INSIDE COVER)

FRACTIONAL LEARNING IN PRIMARY SCHOOL BY USING THE APPROACH OF MATHEMATICS REALISTIC

DISSERTATION

Submitted to the Postgraduate Program of Surabaya State University
to Partially Meet the Requirements for a Doctoral
Degree of Education in Mathematics Education Study Program

Dedi Purnama
NIM 167786007

STATE UNIVERSITY OF SURABAYA
POSTGRADUATE
MATHEMATICS EDUCATION STUDY PROGRAM
2019

APPENDIX 7
EXAMPLE OF DISSERTATION APPROVAL PAGE

APPROVAL

The dissertation by Dedi Purnama, NIM **167786007**, entitled *Fractional Learning in Elementary Schools Using a Realistic Mathematics Approach* has been qualified and approved for examined.

Supervisor I Date

(signature)

Pembimbing II, Date

(signature)

Known by,
Head of Study Program

.....
NIP.....

APPENDIX 8
SAMPLE DISSERTATION RECOMMENDATION PAGE AFTER CLOSED[1] EXAMINATION

RECOMMENDATIONS

Dissertation by....., NIM ..... , has been tested in front of the Testing Team, declared passed on the date ....., and has been revised based on the advice of the testing team, and declared ready to be defended in open examinations.

Examiners Team

Prof.Dr.:.....	Chief/Rector
Dr. :	Secretary/Director of Postgraduate
Prof.....	Member
Prof.....	Member
Prof.....	Member
Prof.....	Member
Prof.....	Member
Prof.....	Member

Known by,
Head of Study Program,

.....
NIP.....

[1] *This sheet is not bound in the dissertation*

APPENDIX 9
EXAMPLE OF A DISSERTATION CONFIRMATION PAGE AFTER OPEN EXAM

RECOMMENDATIONS

Dissertation by ....., NIM,.....
has been maintained in front of a team of testers on .....

Examiners Team,

Prof.Dr.:.....	Chief/Rector
Dr.:	Sekretaris/Direktur Pascasarjana
Prof.....	Member
Prof.....	Member
Prof.....	Member
Prof.....	Member
Prof.....	Member
Prof.....	Member

Known by,
Director,

.....
NIP.....

APPENDIX 10
EXAMPLE OF PROPOSAL TITLE PAGE

LEARNING MODEL DEVELOPMENT
TO IMPROVE RETRIEVAL SKILLS
DECISION AND CONCEPT MASTERY
SCIENCE FOR ELEMENTARY STUDENTS

PROPOSAL

Supervisor

Prof. Dr. Harun Al Rasjid, M.Sc.
Dr. J. Pande Liang, M.App. Sc.

By
Titi Susanti
NIM 177966004

STATE UNIVERSITY OF SURABAYA
POSTGRADUATE
MASTER SCIENCE EDUCATION STUDY PROGRAM
2019

APPENDIX 11
EXAMPLE OF APPROVAL PAGE PROPOSAL[1]

APPROVAL

The proposal on behalf of Titi Susanti, NIM 177966004, will be defended in front of the testing team on June 26, 2019.

Examiners Team

Name	Signature	Position
.....	.....	Head of Examiners Team
.....	.....	Member/Advisor I
.....	.....	Member/Advisor II
.....	.....	Member
.....	.....	Member

Known by,
Head of Study
Program,

.....
NIP .....

[1] This sheet is not bound

APPENDIX 12
EXAMPLE OF PROPOSAL CONFIRMATION PAGE

AUTHENTICATION

Proposal by ....., NIM ....., has been defended in front of a team of testers on ..... and has been revised based on the suggestions and criticisms of the testing team.

Surabaya, ...
Director .....

.....
NIP .....

APPENDIX 13
ABSTRACT EXAMPLES

ABSTRAK

Sholikhin, Muhammad. 2009. *Speech Development of Children's Indonesian at the Single Word Stage.* Thesis, Language and Literature Education Study Program, Postgraduate, Surabaya State University. Supervisors: (I) Prof. Dr. Setya Yuwana, M.A. and (II) Prof. Dr. Bambang Yulianto, M.Pd.

Key Words: *sound characteristics of language, development of language sounds, structure of words and syllables, phonological processes, phonological rules, phonological deviation patterns.*

This study aims to assess the phonological development of Indonesian speech (BI) of children aged 1; 0—2; 6, which includes (1) language sound characteristics (consisting of language sound development, word speech development, and word and syllabic structure), (2) decrease in child BI speech consisting of phonological rules that explain the decline of basic representation (RD) to phonetic representation (RF) and phonological deviation patterns.

In this qualitative approach research, when viewed from the point of language acquisition, a longitudinal language sampling data collection method is used. In this method, three subjects were used to be observed for a relatively long time, namely six months. The three subjects each represented a stage of single-word sentence language development (TKT) that occurred at age 1; 0—1; 6; word combination sentence stage (TKK) that occurs at age 1; 6—2; 0; and the simple and complex sentence stage (TKS) that occurs at age 2; 0— The research subject (S) for TKT is Iza (called S-1),
for TKK is Khrisna (S-2), and for TKS Ida (S-3).

The data of this study sounds Indonesian spoken language in natural speech. Data were collected using participatory observation techniques, non-participatory observation, and field recording in time....

In line with objective (1), the results showed that ...

SYSTEMATICS OF QUANTITATIVE RESEARCH

Quantitative research is research with a deductive-inductive (scientific) approach that is experimental and non-experimental (descriptive). This approach departs from a theoretical framework, expert ideas, or researchers' understanding based on their experience, then developed into problems and solutions proposed to obtain justification (verification) in the form of empirical data support, especially quantitative data in the field.

Systematics of Thesis and Dissertation Quantative Research as follows. Cover Page
Logo Sheet Title Page
Approval Page
Abstract
Preface Table
of Contents
Table of
Contents List of
Figures
Attachment List

CHAPTER I INTRODUCTION

A. Background of the problem
B. Problem Statement
C. Research Objectives
D. Research Uses
E. Research Assumptions
F. Scope and Limitations of Research
G. Definisi Istilah

CHAPTER II THEORETICAL STUDIES

A. Theoretical Foundation
B. Previous Research
C. Research Hypothesis (If any)

CHAPTER III RESEARCH METHODS

A. Research Design
B. Operational Variables and Definitions
C. Population, Sample, and/or Research Subject
D. Data Collection Techniques and Research instruments
E. Data Analysis
F. Checking the validity of findings

CHAPTER IV RESEARCH RESULTS

A. Research Results A
B. Research Results B
C. .....

CHAPTER V DISCUSSION OF RESEARCH RESULTS

A. Discussion of Research Results
B. Research Findings
C. Research and Follow-up Limitations

CHAPTER VI CLOSING

A. Conclusion
B. Suggestions
C. Implications of Research Results (If any)

Bibliography
Attachment List

The following is a description that needs to be considered in quantitative research

CHAPTER I INTRODUCTION

A. Background of the problem

This section suggests that there is a gap between hope and reality, both theoretical and practical gaps behind the problem under study. In it briefly presented theories, research results, seminar conclusions and scientific discussions or personal experiences / observations that are closely related to the subject matter studied. Thus, the problem chosen to be researched gets a firmer footing.

B. Problem Statement

Problem formulation is an attempt to explicitly state the questions to be answered. Problem formulation is a complete and detailed statement of the scope of the problem to be researched based on the identification and limitation of the problem. The problem statement should be brief, concise, clear, and expressed in the form of a question sentence. A good problem formulation will show the variables studied, the type or nature of the relationship between these variables, and the subject of research. In addition, the problem statement should be empirically testable, in the sense that it is possible to collect data to answer the questions asked. Example: Is there a significant relationship between the intelligence level of junior high school learners and their learning achievement in Mathematics?

C. Research Objectives

The purpose of the study expresses the goals to be achieved in the research. The content and formulation of research objectives refer to the content and formulation of the research problem. Research problems are formulated using question sentences, while the formulation of research objectives is expressed in the form of statement sentences. Example: The purpose of this study was to determine the magnitude of a significant relationship between the intelligence level of junior high school learners and their learning achievement in Mathematics subjects.

D. Research Uses

The usefulness or importance of research unravels the benefits of research theory for the development of science or the implementation of development in a broad sense. The usefulness of research provides an overview of the reasons for the feasibility of the problem under study.

E. Research Assumptions

Research assumptions are basic assumptions about something that is used as a basis for thinking and acting in

carry out research. For example, researchers propose the assumption that a person's attitude can be measured using an attitude scale. In this case he does not need to prove the truth of what he assumes, but can directly take advantage of the results of the attitude measurements he obtained. Assumptions can be substantive or methodological. Substantive assumptions relate to research problems, while methodological assumptions relate to research methodology.

F. Scope and Limitations of Research

The scope section includes the variables studied, the population or subject of study, and the location of the study. This section can also be described the elaboration of variables into subvariables and indicators. Research limitations do not have to be present in the thesis or dissertation manuscript. However, limitations are often needed so that readers can respond to research findings in accordance with existing conditions. Research limitations refer to a situation that cannot be avoided in research. The limitations that are often faced concern two things. First, the limited scope of studies that are forced to be carried out for procedural reasons, research techniques, or due to logistical factors. Second, research limitations in the form of constraints sourced from customs, traditions, ethics and beliefs that do not allow researchers to find the desired data.

G. Definisi Istilah

The definition of terms is necessary if it is expected that there will be differences in understanding or lack of clarity of meaning if the affirmation of the term is not given. Terms that need to be emphasized are terms related to the main concepts contained in the thesis or dissertation. The criterion that a term contains a central concept is if the term is closely related to the problem under study or research variable. The definition of terms is more focused on the understanding given by the researcher.

CHAPTER II THEORETICAL STUDIES

Theoretical studies contain theoretical studies and / or analysis to compile a theoretical framework in an effort to solve research problems and / or answer research questions and achieve research objectives. Basically, theoretical studies include (1) literature review related to the problem and / or research focus (*review of related literature*) and (2) preparation of theoretical framework or *theoretical framework* developed by researchers.

The content of theoretical studies should be related to the problems studied and be able to provide an overview of (a) the position (position) of research problems in the chain of development of science and technology or its position in the context of larger problems related to the field studied, (b) targets and targets for solving life problems and their benefits for the development of human life in line with the times, (c) underlie methodological thinking, especially in Determine research design (*research design* and / or *research strategy*) and development of research instruments. In theoretical studies, the constructs of research variables are described through critical analysis until indicators are obtained.

The materials studied / reviewed include sources from scientific journals, textbooks, scientific magazines, seminar papers, policies, laws and regulations, research results, and other information sourced from the internet. Especially for the review of relevant research results, whether the results of the research have been presented in a scientific journal or are still in the form of a research report book, the assessment or analysis is combined with other study materials in accordance with the theoretical analysis subject discussed. The review of research results is not presented separately from other literature reviews in a separate subchapter. The selection of library materials to be studied is based on two criteria, namely (1) the principle of recency (except for historical research) and (2) the principle of relevance. The principle of up-to-date is important because science is evolving rapidly. An effective theory on

A period may already be abandoned in the next period. With the principle of up-to-date, researchers can argue based on theories that at that time were considered the most representative. The same applies to the review of research reports. The principle of relevance is needed to produce a literature review that is closely related to the problem under study.

Submission of research hypotheses in accordance with the formulated problem. Researchers deduce and elaborate a variable that they want to see its effect on other variables. The elaboration of this theory is reinforced by the findings of previous research. For this reason, if the research for writing a thesis / dissertation proposes a hypothesis, it is presented at the end of the theoretical review. Hypotheses are put forward in the form of news sentences or statements.

D. Research Hypothesis (if any)

Not all quantitative research requires a research hypothesis. Quantitative research that is exploratory and descriptive does not require hypotheses. Therefore the subchapter of research hypothesis does not have to be present in the thesis or dissertation of quantitative research results. Procedurally, research hypotheses are submitted after researchers conduct literature reviews, because research hypotheses are a summary of theoretical conclusions obtained from theoretical studies. A hypothesis is a provisional answer to a research problem that is theoretically considered the most likely and highest level of truth.

The formulation of the hypothesis should be definitive or directional. That is, in the formulation of the hypothesis not only mentioned the existence of relationships or differences between variables, but the nature of the relationship or the state of the difference has been shown. Example: There is a positive relationship between the intelligence level of junior high school learners and their learning achievement in Mathematics. If formulated in the form of differences into: Junior high school learners have a high level of intelligence have higher learning achievement in 48

Mathematics subjects are compared with those with a moderate level of intelligence. A good hypothesis formulation should:

1.states the link between two or more variables, (b) is expressed in the form of a question sentence, (c) formulated briefly, concisely, and clearly, and (d) can be tested empirically.

CHAPTER III. RESEARCH METHODS

The subjects contained in the research methods chapter at least include aspects (1) research design,
(2) operational variables and definitions, (3) population and sample, (4) research instruments, (5) data collection, and (6) data analysis.

A. Research Design

Research design is a strategy that regulates the research process to obtain valid data in accordance with the characteristics of variables and research objectives. In experimental research, the chosen research design is the most likely for researchers to control for other variables that are thought to affect the dependent variables. The selection of research design in experimental research always refers to the hypothesis to be tested. In nonexperimental research, the discussion in the research design subchapter contains an explanation of the type of research carried out in terms of its purpose and nature; whether exploratory, descriptive, explanatory, survey, or historical, correlational, and causal comparative research.

B. Operational Variables and Definitions

Research variables are characteristics or attributes that are the focus of research that can change or vary according to the condition of the object or subject of research. The variables involved in the study as well as the nature of the relationship between these variables need to be operationally defined. In quantitative research, the operational definition of variables is a statement of how the variables included in the study will be measured. Or in other words, the operational definition is a statement

About the conception of variables, techniques for measuring or applying variables in research, and the indicators used.

An operational definition is a definition based on the properties of defined things that can be observed. Indirectly, the operational definition will refer to a suitable data collection tool or refer to how to measure a variable. An example of an operational definition of a variable ―arithmetic performance‖ is the ability in arithmetic which includes adding, subtracting, multiplying, dividing, and using decimals. The preparation of operational definitions needs to be done because the observation of the concept or construct investigated will facilitate measurement. In addition, the preparation of operational definitions allows others to do the same so that what the researcher does is open to retesting by others.

C. Population, Sample, and/or Research Subject

In hypothetical research, it is necessary to mention the population as the target of generalizing research results, research samples, and techniques for determining the minimum sample size, including the formulas used. The characteristics of the study population need to be given so that the size of the sample and the method of collection can be determined precisely. Samples need to be selected that are truly representative and reflect the state of the population carefully. While research that does not hypothesize or the target of research is all members of the population, it would be more suitable to use the term research subject.

D. Data Collection Techniques and Research Instruments

This section describes research data collection techniques, such as observation, interviews, tests, or other techniques. Research instruments are used to collect data from the variables studied. The procedure for developing data collection instruments or selecting tools and materials used in research needs to be outlined. For quantitative research, it is necessary to describe how the use of instruments used to measure research variables (validity and

reliability). In this way it will be seen whether the instrument used is in accordance with the measured variable, at least in terms of content. A good instrument must also meet reliability requirements.

In theses and dissertations there needs to be a section describing the process of instrument validation. If the instrument used is not made by the researcher himself, there is still an obligation to report the level of validity and reliability of the instrument used. Another thing that needs to be revealed in the research instrument is how to score or code each question / statement item.

This section also outlines (a) the steps taken and techniques used to collect the data, (b) the qualifications and number of officers involved in the data collection process, and (c) the time schedule for the implementation of data collection. If researchers use other people to carry out data collection, it is necessary to explain how they are selected and how to prepare them for the task. The process of obtaining research permits, meeting authorized officials, and other similar matters do not need to be reported, although they cannot be missed in the process of conducting research.

E. Data Analysis

This section describes the types of statistical analysis used. The method used can be selected using descriptive statistics or inferential statistics. In inferential statistics there are parametric statistics and nonparametric statistics. The choice of the type of data analysis is largely determined by the type of data collected while remaining oriented to the goal to be achieved or the hypothesis to be tested. Therefore, the main thing to pay attention to in data analysis is the accuracy of the analysis technique, not its sophistication. Some parametric statistical analysis techniques may be more sophisticated and able to provide more accurate information when compared to similar analysis techniques in nonparametric statistics. The proper application of parametric statistics should be

It meets some requirements (assumptions), while the application of nonparametric statistics does not demand certain requirements.

The selection of data analysis types or techniques needs to be based on rational selection reasons. If in this analysis a computer is used, it is necessary to mention the program, for example SPSS for Windows.

CHAPTER IV RESEARCH RESULTS

The results of the study are presented in sub-chapters A, B, C, and so on with subheadings according to the formulated problems produced by the research. The initial section describes the general condition of the object of study. The object of study is something under study which can be the attributes of objects, people, organizations or circumstances. Descriptive analysis in the form of descriptions of respondents and variables in the form of frequency distributions, tables, diagrams, or graphs. Descriptive analysis can also contain averages and standard deviations. Next, the process of requirements testing analysis or argumentation about requirements testing that is not carried out. Description of the required assumption test results (e.g. normality, linearity, heteroscedasticity, multicollinearity, etc.) and data analysis test results based on data analysis techniques.

This section also describes the process of hypothesis testing according to standard procedures in hypothesis testing. Researchers need to answer the question of rejected or unrejected research hypotheses based on the level of significance, and explain their intent.

CHAPTER V DISCUSSION OF RESEARCH RESULTS

In this section, researchers provide arguments for the results obtained, for example by relating to relevant theories or research results that have been discussed in Chapter II. The more important thing that must be written in this section is to include the results of research into the treasures of science, for example by stating the results of this research in accordance with the research

Previous or the results of this study revise the results of previous studies.

In this chapter, researchers are required to refer to journals relevant to the field of thesis/dissertation science. To obtain the scientific weight of research, in the thesis it is necessary to refer to at least 10 journals and in the dissertation it is necessary to refer to 20 journals, preferably reputable international scientific journals. In addition, in this chapter can be added a summary of research results if there are enough research variables so that readers get the full results. If the researcher fails to test the hypothesis, then in this subchapter research findings are presented which outline a series of arguments why the proposed hypothesis failed to be verified with field data and a series of recommendations for the researcher concerned or other researchers to make improvements in the next research process.

Research limitations contain obstacles faced by researchers in carrying out research. Limitations need to be mentioned to be corrected in future studies as a follow-up. A limitation is something that researchers cannot do because conditions do not allow it. The obstacle in question is an obstacle that is only known by researchers when researching, not before researching. Follow-up research discusses the sustainability of research that can be developed by researchers or other researchers such as improving procedures to get more accurate research results, focuses or research themes for further research as an impact of the results of research that has been done.

CHAPTER VI CLOSING

This chapter contains conclusions, suggestions, and if needed can be added implications of research results.

A. Conclusion

In this subchapter, research findings that are relevant to the formulation of research problems/questions, research results, and discussion of research results are described. In the dissertation, researchers need to present a theoretical perspective‖

or the theoretical position of research results in the repertoire of the theory studied.

B. Suggestion

This subchapter describes advice for scientists and users of research results. The formulation of suggestions must be relevant to the conclusions and findings of the study.

C. Implications of Research Results

If deemed necessary, researchers can formulate the implications of research results, namely technical and operational suggestions on how to use research results/outputs. For example, the results of the study show differences in student learning outcomes that are better for cooperative learning than conventional learning, then researchers can provide advice to teachers to apply and utilize cooperative learning tools, teaching aids, or media used by researchers. Researchers can also recommend to other researchers next to fix certain things that need to be done but at the time the research is not yet reached.

Bibliography

Library materials included in the reference list must already be mentioned in the text. That is, library materials that are only used as reading material but are not referenced in the text are not included in the reference list. Instead, all library materials mentioned in a thesis or dissertation should be included in the list of references. How to write a list of references. Elements written sequentially include: (1) the author's name is written in order: last name, first name, middle name, without academic degree, (2) year of publication, (3) title, including subtitle, (4) city of publication, and (5) publisher's name.

QUALITATIVE RESEARCH

Qualitative research is a research approach to reveal symptoms holistically-contextually through data collection from natural settings by utilizing the researcher as a key instrument. Qualitative research is descriptive and tends to use analysis with an inductive approach. Process and meaning (subject perspective) are more highlighted in qualitative research.

The characteristics of qualitative research color the nature and form of the report. Therefore, qualitative research reports are prepared in the form of narratives that are creative and in-depth and show authentic naturalistic characteristics. Following the general format of qualitative research is presented, researchers can modify systematics according to the type of qualitative approach chosen.

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CHAPTER III RESEARCH METHODS

A. Approach and Types of Research
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CHAPTER IV RESEARCH RESULTS

A. Stages of Research
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CHAPTER V DISCUSSION OF RESEARCH RESULTS

A. Discussion of Research Results A
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CHAPTER V CLOSING

A. Conclusion
B. Suggestion
C. Implications of Research Results (if any) Reference List

Attachment List

The following is a description that needs to be considered in qualitative research

BAB I PENDAHULUAN

A. Research Context or Research Background

This section describes the context or situation underlying the emergence of the problem of concern to the researcher. Depicting the context of research problems can be done by showing phenomena, empirical facts or actual events that occur in society that have been published through mass media, books, previous research results, or other sources. Researchers need to provide an explanation of the emergence of issues and topics to be researched,

The position of the current research among previous research, and the various reasons that justify that this research is necessary and important to do.

In qualitative research, researchers must also be able to convince readers about the reasons for using qualitative research to answer research questions. The process of literature study of various books and articles related to the research topic needs to show what other things are still unrevealed and still have to be explored and understood further.

B. Research Focus or Problem Formulation

The focus of the study contains detailed statements about the scope or main topics to be revealed/explored in this study. When the term problem formulation is used, the focus of research contains the questions to be answered in the research and the reasons for asking questions. These questions are asked to know what picture will be revealed on the ground. The questions asked must be supported by the reasons why they are presented.

These reasons must be clearly stated, in accordance with the holistic, inductive, and naturalistic nature of qualitative research which means very close to the symptoms studied. These questions were asked after preliminary studies in the field.

C. Research Objectives

The purpose of the study is the target of the results to be achieved in this study, in accordance with the focus that has been formulated.

D. Research Uses

In this section, it is shown the usefulness or importance of research, especially for the development of science or the implementation of development in a broad sense. In other words, the description in the subchapter of the usefulness of the research contains the reasons for the feasibility of the problem under study. From the description in this section, it is expected to be able to

It is concluded that research on the selected problem is indeed feasible to do.

CHAPTER II THEORETICAL STUDIES

Theoretical studies contain theoretical foundations that are used as guides so that the focus of research is in accordance with reality in the field. Theoretical studies contain theories, concepts, arguments that are relevant to the problem. Theoretical studies do not just contain quotations or inclusion of theories, concepts, and paradigms in a row and coherent taken from various sources, but students must harmonize theories and concepts which are then drawn by a common thread to be used as a research framework. In addition, the theoretical foundation is also useful to provide a general overview of the research background and as material for discussion of research results. There is a fundamental difference between the role of theoretical foundations in quantitative research and qualitative research. In quantitative research, research departs from theory to data, and ends in acceptance or rejection of the theory used; While in qualitative research researchers depart from data, use existing theories as explanatory material, and end up with a—theory‖.

The descriptions in the theoretical study are expected to provide scientific guidance on data collection methods and data analysis. Qualitative research aims to explain the application of a theory, where the theory is the result of the induction process of observation of facts (data collection).

CHAPTER III RESEARCH METHODS

This chapter contains a description of operational research methods and steps concerning research approaches, the presence of researchers, research locations, data sources, data collection procedures, data analysis, checking data validity, and research stages.

A. Approach and Types of Research

In part II the researcher needs to explain that the approach used is a qualitative approach, and include brief reasons why this approach is used. In addition, theoretical orientation is also proposed, which is the basis of thinking to understand the meaning of a symptom, for example phenomenological, *grounded research*, symbolic interaction, cultural, ethnomethodological, or art criticism (hermeneutics). Researchers also need to bring up the type of research used whether ethnographic, case study, *grounded theory*, interactive, ecological, or participatory.

B. Presence of Researchers

In this section, it is worth mentioning that researchers act as instruments as well as data collectors. Instruments other than humans can also be used, but their function is limited to supporting the task of researchers as instruments. Therefore, the presence of researchers in the field for qualitative research is absolutely necessary. The presence of these researchers should be explicitly described in the research report. It needs to be explained whether the role of the researcher is as a full participant, participant observer, or full observer. In addition, it is necessary to mention whether the presence of the researcher is known to his status as a researcher by the subject or informant.

C. Research Location

The description of the research location is filled with identifying the characteristics of the location and the reason for choosing the location and how the researcher entered the location. The location should be clearly described, e.g. geographical location, physical buildings (if necessary to include a location map), organizational structure, programs, and everyday atmosphere. Site selection should be based on considerations of attractiveness, uniqueness, and suitability to the chosen topic. With this location selection, researchers are expected to find meaningful and new things. Researchers are not right if they use reasons such as being close to the researcher's home, the researcher has worked there, or the researcher has known key people.

D. Data Source or Research Participant/Subject

This section reports data types, data sources, and data networking techniques with adequate information. The description includes what data is collected, how are the characteristics, who is the subject and informant of the research, how the characteristics of the subject and informant, the selection of subjects, and in the way in which the data is netted, so that credibility can be guaranteed. For example, data is netted from informants selected by snowball *sampling* or maximum variance.

The term sampling in qualitative research should be used with caution. In qualitative research the purpose of sampling is to get as much information as possible, not to generalize. Sampling is imposed on the situation, subject, informant, and time.

E. Data Collection Procedure

This section describes the data collection techniques used, such as participant observation, in-depth interviews, and documentation. There are two dimensions of data recording: fidelity and structure. Fidelity means the extent to which real evidence from the field is presented (audio or video recordings have high fidelity, while field notes have less fidelity). The structural dimension describes the extent to which interviews and observations are conducted in a systematic and structured manner. Matters concerning record types, data recording summary formats, and recording procedures are described in this section.

F. Data Analysis

In the data analysis section, the process of systematically tracking and organizing interview transcripts, field notes and other materials is outlined so that researchers can present their findings. This analysis involves working, organizing, breaking down and synthesizing data as well as finding patterns, revealing what matters, and determining what is reported. In qualitative research, data analysis is carried out

During and after data collection, with techniques such as domain analysis, taxonomic analysis, componential analysis, and theme analysis. Researchers can use inductive, logical, ethical, or aesthetic methods. In the description of this data analysis to be given operational examples, such as matrices and logic.

G. Checking the validity of findings

This section contains a description of the researcher's efforts to obtain the validity of his findings. In order to obtain valid findings and interpretations, it is necessary to examine their credibility by using techniques of extending the presence of researchers in the field, deepened observation, triangulation (using several sources, methods, researchers, theories), peer discussion, negative case analysis, tracking the suitability of results, and checking members. Furthermore, it is necessary to check whether or not it can be transferred to another background (*transferrability*),
dependability on the context, and can be-
Not confirmed to the source (*confirmability*) .

CHAPTER IV RESEARCH RESULTS AND DISCUSSION

A. Stages of Research

In this section, researchers need to explain the general condition of the object and subject of research. Especially for case study research, researchers need to explain the case history of each research subject. This section also describes the process of conducting research starting from preliminary preparation, development of auxiliary instruments, subject selection procedures, coding and systematization of analysis, and forms of reporting.

B. Research Results

The results of the study basically describe two things, namely the description of the findings and the results of data analysis. The description of the findings contains the exposure of the overall results or data obtained by the researcher based on the categories made and refers to the summary of coding results

(interview transcripts, field notes, observation data, etc.). While the results of data analysis describe the researcher's interpretation of the overall research data obtained to answer the questions asked previously in the research focus. In this subsection of data analysis results, researchers can create more subsections according to the results of the data collected. Data that can be transcribed, researchers must include verbatim quotation support (verbatim quotation). For observation, researchers can provide supporting documentation. This section also describes the process of checking the validity of findings according to the chosen method, such as member examination, diligence, or trinregulation.

CHAPTER V DISCUSSION OF RESEARCH RESULTS

A. Discussion of Results

The discussion asks researchers to relate research results to theories that have been built on theoretical foundations, and explain the similarities and differences between theories, rational reasons, previous research results and research results, and discuss them in depth.

Researchers are required to refer to journals that are relevant to the field of thesis/dissertation. To obtain the scientific weight of research, in the thesis it is necessary to refer to at least 10 journals and in the dissertation it is necessary to refer to 20 journals, preferably reputable international scientific journals.

B. Limitations of Research and Follow-up

Research limitations contain obstacles faced by researchers in carrying out research. A limitation is something that researchers cannot do because conditions do not allow it. The obstacle in question is an obstacle that is only known by researchers when researching, not before researching. Follow-up research discusses the sustainability of research that can be developed by researchers or other researchers such as improving procedures to get research results that

More accurately, research focuses or themes for further research as an impact of the results of research that has been done.

CHAPTER V CLOSING

A. Knot

Contains conclusions obtained based on research results. Research conclusions are a synthesis of research findings in the form of a summary of research results and synthesis of findings.

B. Suggestion

Contains suggestions put forward by researchers based on the results of research and discussion. If suggestions are distinguished from the implications of research results, then suggestions are more conceptual or theoretical, while the implications of research results are more operational and technical.

C. Implications of Research Results

If deemed necessary, researchers can formulate the implications of research results, namely technical and operational suggestions on how to use research results/outputs. Research implications refer to the discussion of research results. Implications need to reveal clearly, in detail, and operationally so that it is easy to apply and feel the benefits by certain parties and certain disciplines. Operationally, research implications can be managerial implications and academic implications.

Bibliography

Library materials included in the reference list must already be mentioned in the text. That is, library materials that are only used as reading material but are not referenced in the text are not included in the reference list. Instead, all library materials mentioned in a thesis or dissertation should be listed in the reference list.

SYSTEMATICS OF DEVELOPMENT RESEARCH

Development research is a systematic review of the design, development and evaluation, learning processes and products that must meet certain quality feasibility criteria. Development is an activity that produces a design or product that can be used to solve an actual problem. In this case, development activities are emphasized on the use of theories, concepts, principles, or research findings to solve problems. The resulting products are in the form of theories and development prototypes, including: curriculum, learning models, learning materials, learning media, learning assessment instruments, software, applications, or management systems in learning.

Research written based on the results of development work demands a different format and systematics from those written based on research results, because the characteristics of development activities and research activities are different.

Research activities basically seek to find answers to a problem, while development activities seek to apply findings or theories to solve a problem.

Systematics of Thesis and Dissertation Development Research as follows.

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B. Limitations of Research and Follow-up

CHAPTER VI CLOSING

A. Conclusion

B. Suggestions

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Appendix (Products, Research Instruments, etc.)

The following is a description that needs to be considered in Development Research

CHAPTER I INTRODUCTION

A. Background of the problem

The background of the problem reveals the context of project development in the problem to be solved. Therefore, the description begins by identifying the gaps that exist between real conditions and ideal conditions, as well as the impact caused by these gaps. Various alternatives to overcome the gap need to be briefly described accompanied by the identification of inhibiting factors and their supporters. Problem identification needs to explain the assessment of various possible causes of the problem. In this case, it is necessary to disclose widely various possible problems to be researched.

The alternatives offered as problem solvers and their rationale are put forward in the final part of the background exposure of the problem. Determination of problems related to the development of a product by considering various methodological aspects, feasibility to be researched, and limitations of researchers without sacrificing the meaning, concept, or topic under study.

B. Problem Statement

As an affirmation of what has been discussed in the background of the problem, in this section it is necessary to put forward a specific formulation of the problem to be solved. The formulation of the project development problem should be stated briefly, concisely, clearly, and expressed with a statement sentence or in the form of a question sentence as in the research problem formulation.

C. Research Objectives

The purpose of the study is formulated starting from the problem to be solved using the alternative that has been chosen. Direct the formulation of research objectives to the achievement of ideal conditions as outlined in the background of the problem.

D.Research Product Specifications

This section is intended to provide a complete picture of the expected product characteristics of development activities. Product characteristics include all the important identities that can be used to distinguish one product from another.

The product in question can be in the form of curriculum, learning materials, learning media, evaluation models, learning models, software, technology applications, or other products that can be used to solve training / learning problems, or education. Each product has different specifications from other products, for example the English curriculum has different specifications when compared to the curriculum of other fields of study, although in it can be found the same components.

E. The Importance of Research

The purpose of the study reveals the effort to achieve ideal conditions, while the importance of development expresses the argument why there needs to be a change in real conditions to ideal conditions. In other words, the importance of development research reveals why existing problems are necessary and urgent to solve.

In this section, it is also expected to reveal the relationship between the urgency of problem solving and the wider context of the problem. This link is intended to explain that solving a problem in a microcontext can actually contribute to solving other problems in a broader context.

F. Research Assumptions and Limitations

Assumptions in development research are the basis for determining the characteristics of the products produced and justifying the selection of models and development procedures. Assumptions should be raised from theories that are tested valid, expert views, or empirical data relevant to the problem to be solved using the product to be developed.

These limitations reveal the limitations of the resulting product to solve the problem at hand, especially for the broader context of the problem. This exposure is intended so that the products resulting from this development activity are carefully addressed by users in accordance with the assumptions on which they are based and the supporting conditions that need to be available in utilizing them.

G. Definisi Istilah

In this section, the definition of terms that are typical of being used in the development of the desired product, both in terms of models and procedures used in development or in terms of the products produced. Terms that need to be restricted are only those that have the opportunity to be interpreted differently by readers or users of the product. The boundaries of these terms should be formulated as operationally as possible. The more operational the formulation of term boundaries, the less likely the term is interpreted differently by the reader or user.

CHAPTER II THEORETICAL STUDIES

This chapter reveals a comprehensive frame of reference regarding concepts, principles, or theories used as a basis in solving the problem at hand or in developing the expected product. The terms of reference are prepared based on the study of various theoretical and empirical aspects related to the problem and the efforts to be taken to solve it. The descriptions in this chapter are expected to form the theoretical basis for why the problem needs to be solved and why the way of product development was chosen

Theoretical studies of the models and procedures to be used in development also need to be presented in this section, especially in order to provide justification for the products to be developed.

Relevant research studies are intended to provide an overview of the relationship of development efforts with other efforts that may have been taken by other experts to approach the same or relatively similar problems. Thus, the development efforts to be carried out have a solid empirical foundation and a clear theoretical framework.

CHAPTER III RESEARCH METHODS

Research methods in development research should contain (1) the foundation of the development model, (2) development procedures, and (3) product trials. In product trials it is necessary to disclose (a) trial design, (b) test subjects, (c)type of data, (d) data collection instruments, and (e) data analysis techniques.

A. Foundation of Development Model

Development models can be procedural models, conceptual models, and theoretical models. A procedural model is a model that is descriptive, that is, it outlines the steps that must be followed to produce a product. A conceptual model is an analytical model that describes the components of the product to be developed and the relationships between components (for example, the learning system design model version of Dick and Carey, 2001; R2D2 from Willis, 2005; or Borg and Gall, 2003). A theoretical model is a model that shows the relationship of change between events.

In this section it is necessary to briefly state the structure of the model used as the basis for product development. If the model used is an adaptation of an existing model, then the selection needs to be accompanied by reasons, adjusted components, and strengths and weaknesses of the model.

If the model used is developed in-house, then complete information about each component and the relationship between components of the model needs to be presented. It should be noted that the description of the model is sought as operationally as possible as a reference in product development.

B. Development Procedure

This section describes the procedural steps taken by development in making the product. The development procedure is different from the development model. If the development model is procedural, then the development procedure only follows the steps as seen in the model. The development model can also be conceptual or theoretical. These two models do not directly give clues as to how the procedural steps passed get to the specified product. Therefore, it is necessary to put forward again the procedural steps.

C.Product Trials

Product testing is intended to collect data that can be used as a basis for determining the level of effectiveness, efficiency, and/or attractiveness of the resulting product.

In this section, it is necessary to present the trial design, test subjects, data types, data collection instruments, and data analysis techniques.

1. Test Drive Design

In full, product development trials are usually carried out through three stages, namely individual tests, small group tests, and field tests. In development activities, developers may simply skip and stop at the individual test stage, or continue and stop until the small group test stage, or until the field test. This largely depends on the urgency and data required through that trial.

Product trial designs can use designs commonly used in quantitative research, namely descriptive designs or 70

Experimental. What needs to be considered is the accuracy of choosing a design for a certain stage (individual, small group, or field) so that the data needed to improve the product can be obtained completely.

2. Test Subjects

The characteristics of test subjects need to be clearly and completely identified, including how they are selected. Product test subjects can consist of experts in the field of product content, experts in the field of product design, and / or target product users. Test subjects who are experts in the field of product content can have S2 (for thesis) and S3 (for dissertation) level expertise qualifications. The important thing is that each test subject involved must be accompanied by a clear and complete identification of its characteristics, but limited in relation to the product developed.

The technique of selecting test subjects also needs to be put forward in rather detail, whether using rambang techniques, clumps, or other appropriate techniques.

3. Data Type

Product trials are intended to collect data that can be used as a basis for determining the level of validity, practicality, and/or effectiveness of the resulting product. In this context, often developers do not intend to collect complete data that includes all three. It could be, according to development needs, developers only do trials to see the validity of a product, or just to see the level of effectiveness, or both. This decision depends on solving the problem set out in Chapter I: whether on validity, practicality, effectiveness, or all three.

The emphasis on validity for a problem solving will require data on the validity of the product being developed. The same is the case with the emphasis on product effectiveness. On this basis, then the type of data that needs to be

Collected should be adjusted to what information is needed about the developed product.

Exposure to the type of data collected should be linked to the design and selection of test subjects. Certain types of data, after all, will demand certain designs and certain test subjects. For example, data collection on content accuracy can be done individually from content experts, or in groups in the form of small seminars, or broader seminars involving content experts, design experts, and target product users.

4. Data Collection Instruments

This section describes the instruments used to collect data as stated in the previous point. If using an existing instrument, it is necessary to describe the characteristics of the instrument, especially regarding its validity and reliability. If the instrument used was developed in-house, then the development procedure also needs to be explained.

5. Data Analysis Techniques

The analytical techniques and procedures used to analyze the trial data are set out in this section and are accompanied by their reasons. If the analysis technique used is well known, then the description does not need to be detailed at all. However, if the technique is not widely known, then the description needs to be more detailed.

CHAPTER IV RESEARCH AND DEVELOPMENT RESULTS

In this section, data and data analysis of product development test results are presented. Ideally, the presentation of data from development research results has four stages, namely, (1) presentation and analysis of data from reviews by learning design experts, subject matter experts, media experts, evaluation experts or other experts who understand the developed product, (2) presentation and analysis of individual test result data carried out on 2 or 3 targets / students / students / trainees related to comments from them about the content or material in the development product, (3)

presentation and analysis of data from small group tests conducted on targets / students / students consisting of 8 – 12 people (this group represents the actual target population and does not include them in individual tests), and
(4) presentation and analysis of field test data that presents the shortcomings of the product when used in conditions similar to the conditions when the product was used in the real world. In this field test, 15-30 target people / students / students who have the same or similar characteristics to the target population. Furthermore, data and data analysis of product effectiveness (reliability) test results are presented, generally using experimental research designs.

CHAPTER V DISCUSSION OF DEVELOPMENT RESULTS

A. Study of Development Results

In this section, the researcher presents a revised product study using his original views within the framework of previous theories and empirical studies. There are three aspects that are used as a foothold in the revised product review, namely theoretical, empirical, and implication aspects of research results.

From the aspect of theoretical studies, researchers provide studies of development results in the context of the theory underlying their research. Researchers can refer back to the theories that have been presented in theoretical studies that have been outlined in the chapter on literature review. In other words, theories that are relevant and can be used as arguments to support the results obtained can be put forward as study material. From the aspect of empirical studies, studies are carried out by referring to empirical studies that have been carried out by previous researchers. If the results of the research are consistent with existing theories, the study can be directed to provide references to previous research in accordance with the results of the study. In this context, researchers can recall the results of empirical studies that have been compiled in Chapter 2 (about literature review). Usually, researchers emphasize that the results of their research are in accordance with (or support) the results of previous research. In contexts where research results are inconsistent with theory, the discussion in this section can be directed to

Find empirical studies that can be arguments that support the results of the study.

From the aspect of the implications of the results, researchers interpret the results of research in the context of the implications or practical consequences of the research results for the object of research. The reason why this aspect of implication needs to be pointed out is that the research was based on a historical database (which has already happened). Thus, if the researcher does not discuss the implications of his research then he only stops at the context of the historical story (which has already happened). The study of the implications of research results will bring the research context towards the future, not the past (historical).

B. Limitations of Research, Development and Follow-up

Research limitations contain obstacles faced by researchers in carrying out development research. Limitations are something that cannot be done by researchers because conditions that do not allow in the form of obstacles that are only known by researchers when researching, not before researching. Follow-up research discusses the sustainability of research and development that can be done by researchers or other researchers.

CHAPTER VI CLOSING

A. Conclusion

Contains conclusions obtained based on the results of research and development. The conclusion of development research is an explanation of the resulting product and a concise testing or dissemination process.

B. Suggestion

In this section, researchers present 3 things, namely suggestions for utilization, dissemination, and further product development. Utilization suggestions contain 2 things, namely (1) the use of products that have been developed as innovative works to improve the quality of learning, training, or education, and (2) the use of research results as a theoretical and empirical basis in conducting development research.

Dissemination suggestions are related to the dissemination of products and research results to users (stakeholders) to be able to discuss research results from a theoretical point of view and practical implications. Research stakeholders are those who may benefit from research. Development research products are expected not only to be accepted individually, but more than that, which is institutionally acceptable.

Further product development suggestions contain a description of suggestions for advanced researchers (-development research) relevant to products that have been developed in (1) other courses or subjects, (2) students / students / other trainees, (3) elsewhere, and (4) continuous development time. Further product development suggestions can also be directed at further products (derivative products or supplements) from products that have been developed.

Bibliography

Library materials included in the reference list must already be mentioned in the text. That is, library materials that are only used as reading material but are not referenced in the text are not included in the reference list. Instead, all library materials mentioned in a thesis or dissertation should be included in the list of references.

SYSTEMATICS OF MIXED RESEARCH (QUANTITATIVE AND QUALITATIVE)

Mixed research (qualitative and quantitative) is a combined research between two approaches, namely quantitative and qualitative. This research model can use (a) sequential models, (b) parallel models, (c) concurrent triangulation models, and (d) concurrent embedded models. Sequential models are models that use quantitative research as the basis for qualitative research, or vice versa. A parallel model is a model that uses qualitative and quantitative methods simultaneously. The model combination method or concurrent triangulation design is a research method that combines qualitative and quantitative research methods by mixing the two methods in a balanced manner (50% quantitative methods and 50% qualitative methods). The model combination method or concurrent embedded design (unbalanced mixture) is a research method that combines qualitative and quantitative research methods by mixing the two methods unbalanced. Research reports with mixed methods must have a clear focus, and meet the rules of using qualitative and quantitative methods.

Systematics of Thesis and Dissertation Mixed Research as follows.

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CHAPTER I INTRODUCTION

A.Background of the problem

This section suggests that there is a gap between hope and reality, both theoretical and practical gaps behind the problem under study. Problem orientation contains both quantitative and qualitative aspects and is a consideration of separating quantitative and qualitative problems, or combining the two problems. In it briefly presented theories, research results, seminar conclusions and scientific discussions or personal experiences / observations that are closely related to the subject matter studied. Thus, the problem chosen to be researched gets a firmer footing.

B.Problem Statement

Problem formulation is an attempt to explicitly state the questions to be answered. Problem formulation is a complete and detailed statement of the scope of the problem to be researched based on the identification and limitation of the problem. The problem statement should be brief, concise, clear, and expressed in the form of a question sentence.

The formulation of the problem will have implications with the chosen mixed approach such as explanatory sequence, exploratory sequence, or parallel. If the initial problem is separate from the next problem and demands the use of quantitative research, then the first problem formulation uses quantitative aspects. The next sequence of problem formulation emphasizes the qualitative aspect. For this case, researchers use an explanatory sequential mixed approach, which is to test or verify the theory and then deepen it with a qualitative approach.

C. Research Objectives

The purpose of the study expresses the goals to be achieved in the research. The content and formulation of research objectives refer to the content and formulation of the research problem.

D. Research Uses

The usefulness or importance of research unravels the benefits of research theory for the development of science or the implementation of development in a broad sense. The usefulness of research provides an overview of the reasons for the feasibility of the problem under study.

E. Research Assumptions (When needed)

Research assumptions are basic assumptions about something that is used as a basis for thinking and acting in carrying out research. Assumptions can be substantive or methodological. Substantive assumptions relate to research problems, while methodological assumptions relate to research methodology. Assumptions are adjusted to the chosen mixed approach.

F. Scope and Limitations of Research (If needed)

The scope section includes the variables studied, the population or subject of study, the focus of the study, and the location of the study. Research limitations do not have to be present in the thesis or dissertation manuscript. However, limitations are often needed so that readers can respond to research findings in accordance with existing conditions. Research limitations refer to a situation that cannot be avoided in research. The limitations that are often faced concern two things. First, the limited scope of studies that are forced to be carried out for procedural reasons, research techniques, or due to logistical factors. Second, research limitations in the form of constraints sourced from customs, traditions, ethics and beliefs that do not allow researchers to find the desired data.

G.Definisi Istilah

The definition of terms is necessary if it is expected that there will be differences in understanding or lack of clarity of meaning if the affirmation of the term is not given. Terms that need to be emphasized are terms related to the main concepts contained in the thesis or dissertation. The criterion that a term contains a central concept is if the term

It is closely related to the problem under study, focus or research variable.

CHAPTER II THEORETICAL STUDIES

Theoretical studies contain theoretical studies and / or analysis to compile a theoretical framework in an effort to solve research problems and / or answer research questions and achieve research objectives. Basically, theoretical studies include (1) literature review related to the problem and / or research focus (*review of related literature*) and (2) preparation of theoretical framework or *theoretical framework* developed by researchers.

The content of theoretical studies should be related to the problems studied and be able to provide an overview of (a) the position (position) of research problems in the chain of development of science and technology or its position in the context of larger problems related to the field studied, (b) targets and targets for solving life problems and their benefits for the development of human life in line with the times, (c) underlie methodological thinking, especially in determining research design (research *design* and / or *research strategy*) as well as the development of research instruments. In the study Theory is described as the construct of research variables and indicators or research focus criteria through critical analysis until indicators are obtained.

The materials studied / reviewed include sources from scientific journals, textbooks, scientific magazines, seminar papers, policies, laws and regulations, research results, and other information sourced from the internet. Especially for the review of relevant research results, whether the results of the research have been presented in a scientific journal or are still in the form of a research report book, the assessment or analysis is combined with other study materials in accordance with the theoretical analysis subject discussed. The review of research results is not presented separately from other literature reviews in a separate subchapter. Election

The literature material to be studied is based on two criteria, namely (1) the principle of recency (except for historical research) and (2) the principle of relevance. The principle of up-to-date is important because science is evolving rapidly. A theory that is effective in one period may be abandoned in the next. With the principle of up-to-date, researchers can argue based on theories that at that time were considered the most representative. The same applies to the review of research reports. The principle of relevance is needed to produce a literature review that is closely related to the problem under study.

CHAPTER III. RESEARCH METHODS

The subjects contained in the research methods chapter at least include aspects of (1) types of research, (2) quantitative research methods, (3) pualitative research methods, (4) data collection techniques and research instruments, and (5) data analysis.

A. Types of Research

The type of research describes the chosen research design whether the model is (a) sequential (sequential), (b) parallel model, (c) concurrent triangulation models, and (d) embedded concurrent models and the reasons for choosing such models.

B. Quantitative Research Methods (Customized)

The description of quantitative research is at the beginning if using an explanatory sequential model. If using an exploratory sequential model, then this method is in the next subchapter of the section. If using a parallel model, then the research methods are not separated.

C. Qualitative Research Methods (Customized)

Description of qualitative research at the beginning if using an exploratory sequential model. If using an explanatory sequential model, then this method is in the next subchapter of the section. If using a parallel model, then the research methods are not separated.

D.Data Collection Techniques and Research Instruments

This section describes research data collection techniques for quantitative and qualitative, such as observation, interviews, tests, or other techniques. Research instruments are used to collect data. The instrument needs to know its feasibility. This section also outlines (a) the steps taken and techniques used to collect the data, (b) the qualifications and number of officers involved in the data collection process, and (c) the timetable for the implementation of the data collection. If researchers use other people to carry out data collection, it is necessary to explain how they are selected and how to prepare them for the task.

E.Data Analysis

In this section are outlined the types of statistical analysis and qualitative analysis used. The main thing to pay attention to in data analysis is the accuracy of the analysis technique, not the sophistication. Analysis follows the signs of quantitative as well as qualitative analysis.

CHAPTER IV RESEARCH RESULTS

The results of the study are presented according to the selected mixed research model. The discussion of results can begin with quantitative results, qualitative results, or a mixture of both.

CHAPTER V DISCUSSION OF RESEARCH RESULTS

In this section, researchers provide arguments for the results obtained, for example by relating to relevant theories or research results that have been discussed in Chapter II. The more important thing that must be written in this section is to include the results of research into the treasures of science, for example by stating the results of this research in accordance with previous research or the results of this research revise the results of previous research. To obtain the scientific weight of research, in the thesis it is necessary to refer to at least 10 journals and in the dissertation it is necessary to refer to 20 journals, preferably reputable international scientific journals.

Research limitations contain obstacles faced by researchers in carrying out research. Limitations need to be mentioned to be corrected in future studies as a follow-up. A limitation is something that researchers cannot do because conditions do not allow it. The obstacle in question is an obstacle that is only known by researchers when researching, not before researching. Follow-up research discusses the sustainability of research that can be developed by researchers or other researchers such as improving procedures to get more accurate research results, focuses or research themes for further research as an impact of the results of research that has been done.

CHAPTER VI CLOSING

This chapter contains conclusions, suggestions, and if needed can be added implications of research results.

A. Conclusion

In this subchapter, research findings that are relevant to the formulation of research problems/questions, research results, and discussion of research results are described. In the dissertation, researchers need to express ―theoretical perspectives‖ or theoretical positions of research results in the repertoire of the theory studied.

B. Suggestion

This subchapter describes advice for scientists and users of research results. The formulation of suggestions must be relevant to the conclusions and findings of the study.

C. Implications of Research Results

If deemed necessary, researchers can formulate the implications of research results, namely technical and operational suggestions on how to use research results/outputs. Researchers can also recommend to other researchers next to fix certain things that need to be done but at the time the research is not yet reached.

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